



INTERNET USE PATTERNS, ACCEPTANCE LEVELS,
AND POLICY RECOMMENDATIONS:
AN INFORMATION TECHNOLOGY INFUSION
APPROACH TO THE INTERNET AND
THE UNITED STATES AIR FORCE

THESIS

Pamela E. Quintero, Captain, USAF

AFIT/GIR/LAR/96D-7

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THESIS

Presented to the Faculty of the Graduate School of Logistics
and Acquisition Management of the Air Force Institute of Technology

Air University

Air Education and Training Command

In Partial Fulfillment of the

Requirements for the Degree of

Master of Science in Information Resource Management

Pamela E. Quintero

Captain, USAF

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Pamela E. Quintero

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Abstract

Information technology infusion has taken place in the workplace as costs for microcomputers have declined and the need for reliable and timely information has increased, but the impact the Internet has had is yet to be determined. This research takes an information technology infusion approach to the Internet and focuses on the use patterns of current Air Force Internet users, acceptance levels, and supervisory support of the technology, as well as policy recommendations regarding Internet use in the Air Force.

The research provides substantial evidence that Internet technology is not being infused equally within all organizational levels in the Air Force. All infusion measures used in this research show that Internet technology is more highly infused at the headquarters-level than it is at base-level. This research also demonstrates that supervisory support for Internet use positively affects user acceptance levels on the part of subordinates. Access to the Internet is also shown to improve Air Force members' productivity on the job.

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I. INTRODUCTION

Research Issue

The personal computer and other technological advances have had a major impact on the business world. The past several years have seen tremendous technical advancements facilitating the widespread use and increased acceptance/routinization of the microcomputer in the workplace and associated technologies, such as Internet access. Information technology infusion has taken place in the workplace as costs for microcomputers have declined and the need for reliable and timely information has increased, but the impact the Internet has had is yet to be determined.

Recently (within the past two years) access to the Internet has become more commonplace in many workcenters. Given that fact, a number of questions arise of importance to United States Air Force leadership and policy makers, including: Is the information technology of the Internet being infused equally throughout all levels of the Air Force? For what purposes are Air Force members using the Internet? Is Internet access increasing productivity? What should the Air Force's policy be regarding Internet use? This research will focus on the use patterns of current Air Force Internet users, acceptance and

routinization of the technology and policy recommendations regarding Internet use in the Air Force.

Background

For a technological innovation (such as the Internet) to be truly valuable, it must be incorporated into the adopting organization's operational work systems (Kwok and Arnett, 1993). One component of incorporation, that of infusion, is defined as "the extent to which the full potential of the innovation has been embedded within an organization's operational or managerial work systems" (Zmud and Apple, 1992: 148). The importance of information technology infusion has been studied by a number of researchers, including Cooper and Zmud, (1989), Kwok and Arnett (1993), Zmud and Apple (1992), and others. However, little research has been conducted to study how the technology of the Internet is being infused into the work place, specifically in the Air Force. Furthermore, the question remains whether the infusion of Internet technology is taking place throughout all levels of the Air Force and what the implications are concerning Internet policy, and the implementation of that policy.

Technological innovation, whether initiated to gain competitive advantage or to maintain a competitive edge, has become an ongoing process within our society (Zmud and Apple, 1992). However, when technology such as the Internet is implemented¹ within an organization, its impact is dependent at least as much by the organization's response to it as by the nature of the technology

(Carr, 1993). Simply implementing² a new technology will seldom solve problems effectively--and may very well distract the organization from the real tasks at hand. They must then *use* that new technology to solve organizational problems.

Organizational leaders must understand the difference between technology implementation and problem solving (Carr, 1993). Recognizing the difference between these concepts, effective leaders will develop an information *infusion* strategy.

Research Objective

Very little research has been directed at understanding the impact that increased use and acceptance of Internet technology is having on organizations, and specifically the Air Force. Furthermore, a number of questions remain regarding technology infusion levels, use patterns, user acceptance, and perceptions of current Air Force Internet policy. Specifically:

1. Is the information technology of the Internet being infused equally into all levels of the Air Force?
2. Does level of management support of Internet technology and its use on the job affect the level of acceptance on the part of individuals within the unit?
3. Does access to the Internet have a positive impact on Air Force members' productivity on the job?

¹ Implementation, as used in this context, is referred to as *adaptation* in the Cooper and Zmud (1989) Information Systems Implementation Model.

4. Does a person's experience with a private Internet service provider affect the level of user acceptance?
5. For what purposes are Air Force members using the Internet?
6. How do Air Force members perceive the Air Force policy on Internet use, as implemented within their organization?
7. What recommendations can be made regarding Air Force Internet use policy, and the implementation of that policy?

Research Approach

A relevant and extensive review of the existing research literature was first organized to facilitate understanding of the process by which technology infusion occurs in the workplace. Next, the degree of Internet technology infusion that has occurred in the Air Force, as measured by self-reports of use patterns and acceptance levels, is explored using personal interviews and organizational surveys. Through the use of both written surveys and personal interviews, the researcher evaluated the level of use and acceptance seen at varying organizational levels of the Air Force. Lastly, policy recommendations based upon the perceptions and suggestions of current Air Force Internet users are presented.

² Carr uses the terms *technology infusion* and *technology implementation* interchangeably. For purposes of clarity and consistency with this researcher's definition of terms, *implementation* will be used in reference to Carr's work.

Scope and Limitations

This research is limited in scope to those organizations and individuals which are part of Air Force Material Command located on or near Wright-Patterson AFB OH and those individuals at the 82nd Training Wing at Sheppard AFB TX. This limitation is due to funding and time constraints and may, in fact, have an impact on the generalizability of this research. However, contrasting the responses of individuals at headquarters-level with those at base-level may provide for wider generalizability of results. As this research does not control for Air Force major command (MAJCOM)--Headquarters Air Force Material Command is a MAJCOM organization and the 82nd Training Wing (82 TRW) belongs to a different MAJCOM, Air Education and Training Command (HQ AETC)--causal relationships based upon command level can not be determined. These limitations are discussed in detail in Chapter V.

USAF Implications

Recognizing that a widespread technology explosion (in the form of Internet technology) is already taking place throughout the Air Force, this research may enable information resource managers to make predictions based upon the theory of information technology infusion. Based on those predictions, it may be possible to identify future applications and implications for the Air Force that will enable managers to make more informed decisions regarding how they plan to conduct business in the future.

This research will strive to provide valuable data on the level of Internet access currently available at different organizational levels in the Air Force, along with use and acceptance of the technology. Additionally, this research will attempt to provide insight regarding how the Internet impacts Air Force organizations, their people, and the way they conduct business. Furthermore, perceptions of Air Force members concerning current Internet use policy may provide senior Air Force policy makers with important information for use in the formulation and implementation of future Internet use policies.

Summary

This chapter provided an overview of the research issue being investigated (including eight research questions) and some background information about information technology infusion. Also discussed was a brief explanation of the research approach, scope and limitations of the research, and implications for the Air Force. Chapter II will provide a detailed look at current literature related to user acceptance, supervisory support for new technology, and information technology infusion.

II. REVIEW OF THE LITERATURE

Overview

This chapter will provide background information regarding the Internet and some of the current applications being used on the Internet. A review of existing research into information technology infusion and user acceptance models is also presented. Different models and strategies will be explored and a case study of information technology infusion in the workplace will be examined. Furthermore, the impact of supervisory support for new information technologies will be addressed as it relates to user acceptance.

Internet

The Internet is commonly described as a "network of networks" (Wiggins, 1994). No single authority owns or administers the Internet. The Internet's origins date back to the 1960s with the development of ARPANET. The Advanced Research Projects Agency (ARPA), an agency of the U.S. Department of Defense, contracted with Bolt, Beranek, and Newman (BBN) to link four sites together--Stanford Research Institute, The University of California at Los Angeles and at Santa Barbara, and the University of Utah.

Over time, many more institutions (government, university, and corporate research) became a part of ARPANET. In the early 1980s, the Department of Defense decided to separate the military part of ARPANET and form the network "Milnet." The Internet, as it came to be called, continued to grow throughout the

1980s, and by 1990 the term "ARPANET" was phased out. Between 1983 and 1994, the number of hosts on the Internet swelled from a few hundred to over two million. This increase in hosts providing information via the Internet brought about an increased need for navigational tools to locate and access that information.

Currently, three navigation and access tools are commonly used within the Air Force--the World-Wide Web, Gopher, and Wide Area Information Servers (WAIS). Internet applications such as Listservs, Telnet, Usenet, and FTP are also frequently used today. Each will be briefly described below.

World-Wide Web. The World-Wide Web (WWW) is a network-based hypertext delivery system. Hypertext allows a document to have embedded links to other documents. The user "clicks" on the embedded link and immediately retrieves the linked document. Tools such as Mosaic®, Netscape®, and Internet Explorer® are commonly used for exploring the WWW.

Gopher. Gopher is a simple document delivery tool. It can deliver documents, lists of documents, and indexes.

Wide-Area information Servers (WAIS). WAIS is a tool that prepares indexes of unstructured documents on the Internet for an information provider, and then allows users to search those indexes with natural language questions.

Listserv. A listserv is a tool that compiles electronic mail (e-mail) messages sent to and from a specified group of individuals (list members). It

then transmits copies or lists of copies of those e-mails to each of the list members.

Usenet News. Usenet News is a distributed discussion list system.

Telnet. Telnet is a protocol used over Transmission Control Protocol/Internet Protocol (TCP/IP) for remote-terminal sessions.

FTP. File Transfer Protocol (FTP) allows users to retrieve files over the Internet.

The Internet is continually evolving and will likely be composed of different elements in the future. In the context of this research, the Internet is composed of those elements described above. As the Internet continues to expand and provide access to important information, organizations need to determine how best to implement that technology.

Information Systems Implementation Model

Viewed from the technology diffusion perspective, information system implementation is considered to be organizational effort directed toward diffusing appropriate information technology within the user community. Cooper and Zmud (1989) conducted research regarding organizational implementation of Material Requirements Planning (MRP). They proposed a stage model of information system implementation as presented below.

Initiation

- Process: Active and/or passive scanning of organizational problems/opportunities and information technology solutions are undertaken. Pressure to change evolves from either organizational need (pull) technological innovation (push), or both.

- Product: A match is found between an information technology solution and its application in the organization.

Adoption

- Process: Rational and political negotiations ensue to get organizational backing for implementation of the information technology application.
- Product: A decision is reached to invest resources necessary to accommodate the implementation effort.

Adaptation

- Process: The information technology application is developed, installed, and maintained. Organizational procedures are revised and developed. Organizational members are trained both in the new procedures and in the information technology application.
- Product: The information technology application is available for use in the organization.

Acceptance

- Process: Organizational members are induced to commit to information technology application usage.
- Product: The information technology application is employed in organizational work.

Routinization

- Process: Usage of information technology application is encouraged as a normal activity.
- Product: The organization's governance systems are adjusted to account for the information technology application; the information technology application is no longer perceived as something out of the ordinary.

Infusion

- Process: Increased organizational effectiveness is obtained by using the information technology application in a more comprehensive and integrated manner to support higher level aspects of organizational work.
- Product: The information technology application is used within the organization to its fullest potential (Cooper and Zmud, 1989: 472).

Diffusion research indicates that technological complexity is a significant negative factor in implementation (Cooper and Zmud, 1989). Research involving

MRP implementation showed that increased complexity will lead to increases in computer programming errors, which will negatively impact MRP implementation success (Cooper and Zmud, 1989).

Technological Innovation

Information about new methodologies and technologies is generally acquired by businesses long after the innovations are made and new products introduced into the market (Dixon, 1991). There is also usually a lag between the information technology's arrival and its distribution to the employees who are most able to use it. These delays can reduce the competitive edge the company might have realized by implementing the technologies soon after development (Dixon, 1991).

Technological innovation, whether initiated to gain competitive advantage or to maintain a competitive edge, has become an ongoing process within our society (Zmud and Apple, 1992). However, when technology is implemented³ into an organization, its impact is dependent at least as much by the organization's response to it as by the nature of the technology (Carr, 1993). Simply implementing⁴ a new technology will seldom solve problems effectively--and may very well distract the organization from the real tasks at hand. Organizational leaders must understand the difference between technology implementation and problem solving (Carr, 1993).

³ Implementation, as used in this context, is referred to as *adaptation* in the Cooper and Zmud (1989) Information Systems Implementation Model.

For a technological innovation to be truly valuable, it must be incorporated within the adopting organization's operational or managerial work systems (Zmud and Apple, 1992). One component of incorporation, that of infusion, is defined as "the extent to which the full potential of the innovation has been embedded within an organization's operational or managerial work systems" (Zmud and Apple, 1992: 148)

An Example of Technology Infusion

Computer-Aided Software Engineering (CASE) technology, a fairly recent development for programmers, analysts, software engineers, and even corporate executives, is composed of automated tools which represent years of research on integrated development environments and automated software development. Despite the benefits CASE technology offers, its use has been met by resistance from some types of organizations (Kwok and Arnett, 1993).

A study was conducted taking into consideration the company's organization involvement and the five phases of the Systems Development Life Cycle. The researchers found the consequences of development activities via CASE tools are dependent on the degree of involvement of a particular organization in the five phases of SDLC and the willingness of management to respond to technological changes and to accept all corresponding organizational changes (Kwok and Arnett, 1993).

⁴Carr uses the terms *technology infusion* and *technology implementation* interchangeably. For purposes of clarity and consistency with this researcher's definition of terms, *implementation* will be used in reference to Carr's work.

As technology is introduced into an organization, it is likely to create conflict if not managed properly (Kwok and Arnett, 1993). Kwok and Arnett view organizations as a group of individuals who often have conflicting priorities, objectives, and values. As new technologies are introduced, they often result in a redistribution of responsibilities and the corresponding redistribution of power horizontally and vertically among personnel (Kwok and Arnett, 1993).

Technology diffusion varies depending on the research structure of the particular organization involved (Link and Zmud, 1987). Some firms rely heavily on a central research and development (R&D) laboratory to disseminate technical information throughout the firm. In this role, the central lab acts as the gatekeeper. As such, firms with central R&D laboratories, (as opposed to only divisional laboratories which are generally tied to product-specific research) tend to direct a larger portion of their total R&D budget to basic research (Link and Zmud, 1987). Because of this more fundamental research focus, firms with central R&D laboratories may find the technical information available in external sources less useful than firms with only divisional laboratories (Link and Zmud, 1987).

As CASE technology is introduced into organizations, traditional computer-based information systems (CBIS) personnel might be gradually replaced by systems analysts who possess CASE knowledge (Kwok and Arnett, 1993). Redistribution of responsibility may cause resistance from traditional CBIS personnel, who develop the feeling of job instability, eventually depleting employee morale and loyalty within the organization. The balance of power

within the organization will change, causing a redistribution of power and responsibilities (Kwok and Arnett, 1993).

Supervisory Support for New Technology

Supervisory support for new technology has been commonly recommended as key to successful information technology implementation and subsequent infusion (Rogers, 1983; Zmud, 1984; Leonard-Barton and Deschamps, 1988; Lucas et al., 1990; Swanson, 1988, Saga, 1994). As noted by Saga (1994), the effort put forth by managers to inspire use includes supplying resources to support the new technology (i.e. money, training, and supplies) and championing its use by providing subordinates with encouragement and incentives to use the technological innovation. Managerial support can be assessed using the two measures described below.

Top Manager Beliefs. Favorable top manager's beliefs about technological innovations (Tornatsky and Klein, 1982) have been found to be positively linked to implementation success and have been operationalized in terms of user acceptance (Zmud, 1984). Zmud (1984, p. 729) states "innovation typically requires the reallocation of scarce resources...without the active support of top management it is unlikely such allocations will occur or that the necessary infrastructure (boundary-spanning roles, risk-taking climate, etc.) will exist."

Perceived Manager Support. Leonard-Barton and Deschamps (1988) suggest perceived manager support or "perceived opinions or desires of powerful sources" can alter a person's behavior. Other research supports the

idea that perceptions of top managerial support directly influences member perceptions of usefulness (Lucas et al, 1990), adoption, and user acceptance (Leonard-Barton and Deschamps, 1988).

User Acceptance

The construct of *user acceptance* has taken on a variety of meanings; depending on the author, the construct can reflect an attitude, a belief, an intention or an action. Saga and Zmud (1994: 67) define acceptance as referring to "efforts undertaken to induce organizational members to commit to the use of IT applications." When measuring user acceptance, "user satisfaction" and "system use" often serve as surrogate measures (Ginzberg, 1981; Ives and Olson, 1984). User acceptance has also been modeled as a precursor to system use (Davis et al., 1989), as a person's *intention* to use a new technology may often precede its actual use (Sheppard, Hartwick, and Warshaw, 1988).

Saga and Zmud (1984: 69) state that user acceptance "can be viewed as a process that is multifaceted and comprises of actions, intentions, and attitudes." As such, three variables are presented in their research to represent user acceptance: attitude toward use, intentions to use, and frequency of use. The relationships between the three constructs demonstrate that "as attitudes toward a technology's use become more positive, intentions to use the technology increase, which in turn increases the technology's frequency of use."

Measuring Technology Incorporation/Infusion

Technological innovation has become an ongoing process in an increasing number of organizations (Zmud and Apple, 1992). Most technological innovations occur because the adopting organization is striving to either introduce new products or services into the marketplace, or to improve work processes to make the organization more profitable (Zmud and Apple, 1992).

The extent to which anticipated benefits of an innovation, as well as any unanticipated difficulties, are realized is largely reflected in the success with which an innovation has been incorporated into an organization's operational and managerial work systems (Zmud and Apple, 1992). For the purposes of this paper, incorporation is defined as "the implementation activities directed towards embedding an adopted innovation within an organization" (Zmud and Apple, 1992).

Zmud and Apple found, in a combined quantitative and qualitative study aimed at measuring both routinization and infusion of electronic scanners in supermarket chains, that infusion can be measured and is distinct from routinization. Zmud and Apple suggest that in order to fully understand the extent to which an innovation has been incorporated and thus recognize the nature of effective incorporation processes, it is necessary to examine the nature of the innovation's routinization and infusion.

Strategy for Information Technology Infusion

An effective information technology infusion strategy requires a plan (Carr, 1993; Dixon 1991). Dixon (1991) recommends the following eight steps for planning an information infusion strategy:

- Staff members research and identify new methodologies and technologies.
- Information--solicited and unsolicited--about new methods and technologies is received and distributed promptly.
- The most useful methods and technologies are identified.
- Management decides whether to invest in the proposed technology.
- If the go-ahead is given, strategic and tactical planning is carried out for integrating the new methods and technologies and later assessing their performance.
- The staff is informed and trained as needed.
- The methods and technologies are implemented.
- Evaluation and reevaluation steps are carried out according to plan.

Companies with successful information technology infusion programs use gatekeepers--employees assigned to stay informed in selected areas and then direct the flow of information to other employees as needed (Dixon, 1991).

Dixon suggests gatekeepers have other duties besides IT infusion, which should take half their time. He outlines the following requirements for gatekeepers:

- Subscribe to all journals, both research and trade, relevant to their topics.
- Attend technical conferences and meetings, returning with proceedings to circulate to selected employees.
- Become active on committees in two or three of the most appropriate professional societies or industry trade organizations.
- Contact vendors whose technologies are at the forefront of the field, whether or not immediate purchases are to be made.
- Maintain (with staff support) a library of papers and articles, specialized books and journals, lists of vendors, and product information.

- Attend company meetings on new products and processes.

Deciding how much information on the new technology should be infused into an organization (and to whom) is a matter of judgment and experimentation on the part of the gatekeeper. Too much information flow might be perceived as noise and ignored; too little might result in lost opportunities (Dixon, 1991).

Conclusion

This chapter reviews current research literature to explain the process by which information technology infusion occurs in the workplace. The material presents models and strategies for effective implementation of a new information technology, to include acceptance, routinization, and infusion. This research lays the foundation for studying the level of Internet technology infusion that has occurred within the Air Force.

III. METHODOLOGY

Overview

This chapter outlines the methodology used in this study to answer the research questions posed in Chapter I. A brief summary of the problem is presented, followed by the data collection methodology, sample population, statistical procedures, and assumptions used in conducting this research.

Problem Summary

Very little research has been directed at determining whether information technology infusion of the Internet has occurred within the Air Force, and if so, to what degree and at what levels it is taking place. An understanding of the impact that increased use and acceptance of Internet technology is having on Air Force organizations is necessary for appropriate policies to be made and for those policies to be implemented properly. The focus of this research, therefore, is on how the Internet is currently being used (*infusion level*), how it should be used (policy recommendations), user attitudes toward the Internet (*user acceptance measure*), how much time is spent using the Internet (*infusion level*) how much time is saved (*productivity measure*), and what potential applications are seen for use of the Internet in the future (policy recommendations). The specific research questions are as follows:

1. Is the information technology of the Internet being infused equally into all levels of the Air Force?

2. Does level of management support of Internet technology and its use on the job affect the level of acceptance on the part of individuals within the unit?
3. Does access to the Internet have a positive impact on Air Force members' productivity on the job?
4. Does a person's experience with a private Internet service provider affect the level of user acceptance?
5. For what purposes are Air Force members using the Internet?
6. How do Air Force members perceive the Air Force policy on Internet use, as implemented within their organization?
7. What recommendations can be made regarding Air Force Internet use policy, and the implementation of that policy?

Definition of Terms

For the purposes of this research, the following terms are defined, *routinization, infusion, level of acceptance, and supervisory support*. The measurements used in the analysis of the data are presented following the discussion of the survey instrument.

Routinization. Routinization refers to the alterations that occur within an organization's work systems to account for information technology applications, "such that these applications are no longer perceived as new or out-of-the-ordinary" (Saga and Zmud, 1994).

Infusion. Infusion is defined as "the extent to which the full potential of the innovation has been embedded within an organization's operational or managerial work systems" (Saga and Zmud, 1994; Zmud and Apple, 1992).

Level of Acceptance. The construct of *user acceptance* has taken on a variety of meanings; depending on the author, the construct can reflect an attitude, a belief, an intention, or an action. This research applies Webster's Ninth New Collegiate Dictionary (1986, pg. 48) definition of the root term "accept" as an act: "to receive willingly; to receive favorably something offered, to regard as proper normal, or inevitable; to recognize as true; to make a favorable response; and to agree to undertake." Applying this definition to an information technology infusion context, user acceptance is defined as the act of "receiving and utilizing Internet technology willingly and favorably."

Productivity. This research applies Webster's Ninth New Collegiate Dictionary (1986, pg. 938) definition of the root term "productive" describing something as: "having the quality or power of producing...in abundance; effective in bringing about, yielding or furnishing results, benefits or profits; yielding...satisfaction of wants or the creation of utilities." Applying this definition to an information technology infusion context, productivity is defined as: "using Internet technology effectively and efficiently, yielding benefits to the organization."

Supervisory Support. Supervisory support for technological innovations has been linked to successful IT implementation (Tornasky and Klein, 1982; Zmud, 1984). For the purposes of this research, supervisory support for Internet

technology is operationalized in terms of a manager's own use of the technology and his or her expectations regarding subordinate use.

Data Collection Methodology

Data was gathered for this research effort using personal interviews and a survey instrument (Internet Use in the Workplace Survey, Appendix A). The survey instrument was designed using experience gained in an Air Force Institute of Technology (AFIT) graduate course--RSCH630 Research Methods. The instrument was reviewed by all members of the author's thesis committee, and numerous fellow AFIT students. The instrument was evaluated to ensure the questions were clear and unambiguous, and to make certain the data collected would be consistent with research goals. A number of suggestions and improvements were incorporated into the instrument prior to its dissemination.

The survey was disseminated using paper copies as well as via electronic mail. The survey instrument included scaled responses, multiple choice questions, and open-ended questions. Use of a survey instrument was selected due to its versatility and as a practical means to gather data and opinions from a large number of respondents (Cooper and Emory, 1995).

Personal interviews were conducted to add richness and support to the data collected in the survey instrument and to provide an additional method of data collection for this research. Multiple data collection methods are important to effective research because each data collection method (i.e. questionnaire, telephone interview, face-to-face interview) is limited in terms of what it can

measure effectively (Pinsonneault and Kraemer, 1993). As reported by Pinsonneault and Kraemer (1993), multiple methods provide the researcher with more complete data on the phenomenon of interest, along with a broader and richer understanding of the data.

The individuals chosen for personal interviews were selected by the research sponsor and were known to have extensive familiarity with Internet use within their organizations. For the purposes of this research, *elite interviewing* for information from well-informed people in an organization (Cooper and Emory, 1995) was chosen. Only those familiar with their organization's Internet use patterns were selected to be interviewed as it was felt those *without* familiarity would not be able to provide the researcher with sufficient information on the subject.

The survey instrument was designed to gather both quantitative and qualitative data. The qualitative portion of the survey was meant to elicit opinions and attitudes from the respondents, dealing with such issues as use patterns, potential uses for the Internet, and opinions on organizational implementation of Air Force Internet use policies.

Quantitative data was collected in Section III of the survey using Likert-scaled responses to various statements such as "I access the Internet daily to do my job." Quantitative data was collected in Section IV of the survey, using multiple choice responses to questions such as "How do you perceive your organization's Internet policy?" The survey was approved for distribution by HQ

AFPC/DPSAS on 7 October 1996 and assigned control number USAF SCN 96-78. Appendix A is a complete copy of the survey instrument.

Measurements Used

A number of measures were developed using questions from the survey instrument. The measures used in the analysis of data for *infusion*, *level of acceptance*, and *supervisory support* are presented below.

Infusion will be measured as the mean score and analysis of variance between the following survey questions: Section I, Question 4 (Does the computer you use at work have Internet access?), Section III, Item 11 (I could not do my job without access to the Internet), Section IV, Question 4 (Approximately what percentage of those individuals in your immediate area have computer on their desks that have Internet access?), and 5 (How much time each day (on average) do you spend *using* the Internet?).

Whether *infusion is occurring at all levels equally* will be measured as the mean and analysis of variance between organizational level (Section I) and the infusion measures mentioned above.

Level of Acceptance will be measured as the mean score and analysis of variance between Section III, Question 1 (I am comfortable using the Internet), 3 (I use the Internet, but only because I have to in order to accomplish certain aspects of my job), and 8 (I enjoy using the Internet to accomplish certain aspects of my job).

A person's *experience with a private Internet service provider* related to *user acceptance* will be measured as the mean score and analysis of variance between Section II, Question 3.5 (Do you use a personal Internet service provider [i.e. AOL, ERInet, etc.] at home?) and the *user acceptance* measures described above.

Productivity will be measured as the mean score and analysis of variance between of Section III, Items 4 (I often discover new ways to use the Internet to make my job easier), 7 (My effectiveness in my job has been positively impacted by having access to the Internet), 10 (My effectiveness in my job has been negatively impacted by having access to the Internet), and 16 (Access to the Internet has made me more productive), and Section IV, Question 5 (How much time do you feel use save each day by using the Internet?).

Supervisory support will be measured as the mean score and analysis of variance between Section III, Items 2 (My supervisor routinely uses the Internet to accomplish his/her work), 9 (My supervisor encourages use of the Internet), 12 (My supervisor expects me to be more productive since I have access to the Internet), and 15 (My supervisor rarely uses the Internet).

Sample Population

Since the focus of this research is on Internet use, acceptance, and policy within the Air Force, the decision was made to survey Air Force personnel at both Air Force major command (MAJCOM) headquarters level and non-MAJCOM (base level) organizations. As Headquarters Air Force Materiel

Command at Wright-Patterson Air Force Base sponsored this research, the headquarters was a logical starting point.

In order to contrast the level of use and acceptance at MAJCOM-level with that at base-level, the 82nd Training Wing at Sheppard AFB TX was selected to participate in the study. The fact that Sheppard belongs to a different major command (AETC) than the other population being sampled was also considered as a way of gaining more information regarding infusion levels in different organizational levels. Additionally, the wing commander expressed interest and support for the research topic. However, not controlling for MAJCOM may be a limiting factor to consider, as discussed in the "Limitations" section in Chapter V.

Statistical Procedures

Section III of the survey instrument contains 16 statements for which the survey participant is asked to select a response. Responses are in the form of a scale from one to five. As an example, the responses to the user acceptance questions were: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree.

Responses to survey questions are presented graphically in Chapter IV. Total numbers and percentages are charted, with combined numbers for all responses contrasted with that of headquarters-level and base-level figures for each survey item. The mean, median, and mode (broken out by organizational

level) is also presented for each question. The statistical package used for this analysis is Microsoft Excel 5.0®.

Assumptions

The research conducted for this study involves two assumptions:

1. The Likert scale used in the questions provides interval level data.
2. The sample population is representative of the parent population.

Summary

This chapter provided an in-depth look at the methods by which data was collected for this study, the statistical methods used to analyze the data, as well as the limitations encountered. Terms were defined and measurements used in Chapter IV were presented. Chapter IV presents detailed results of the survey responses.

IV. ANALYSIS OF DATA

Overview

This chapter presents the results of 245 completed, usable survey responses. The Internet Use in the Workplace Survey was distributed electronically to approximately 1200 HQ AFMC members; 146 usable surveys were returned for a HQ AFMC return rate of approximately 12 percent. Thirteen were returned with no data on the electronic version of the survey instrument.

The survey instrument was distributed in paper form at the 82nd Training Wing at Sheppard AFB TX. Two hundred surveys were distributed and 99 usable surveys were returned for a base-level return rate of 49 percent. The overall return rate for the survey instrument therefore is just over 17 percent.

This section presents the data in the same order as collected in the survey instrument. The Internet Use in the Workplace Survey is shown in Appendix A, while summary tables of the data collected in Sections I through IV of the survey are presented in Appendices B, C, D, E, F, and G. An analysis of the data follows the initial presentation of the data.

Presentation of Data

Survey Instrument--Section I. This section of the survey requested limited demographic information--organizational level of the respondent (base/headquarters), rank/pay grade, years in current job, and years in federal or military service. Respondents had the option of supplying their name, duty title, e-mail address and duty phone--none of which is presented in this research, thus

affording anonymity to the respondents. Responses to Section I are graphically illustrated below.

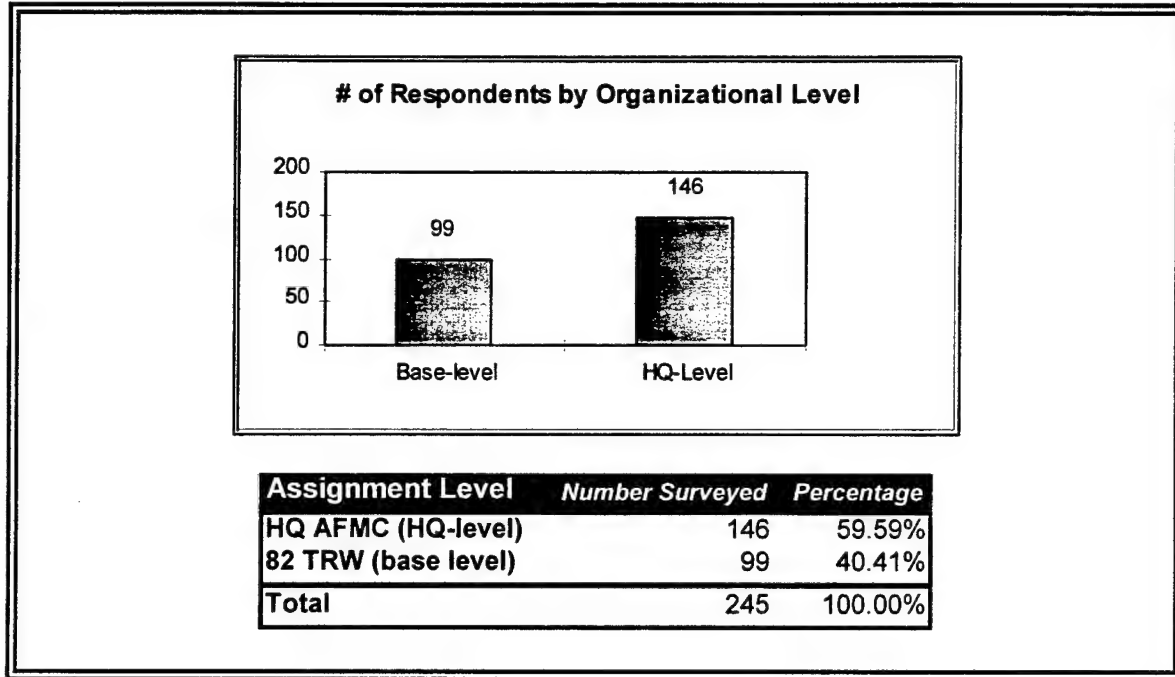


Figure 1: Number of Respondents by Organizational Level

Figure 1 shows the assignment level of those individuals who responded to the Internet Use in the Workplace Survey. HQ AFMC respondents comprised 60 percent of the survey responses, and the remaining 40 percent consisted of the base-level responses.

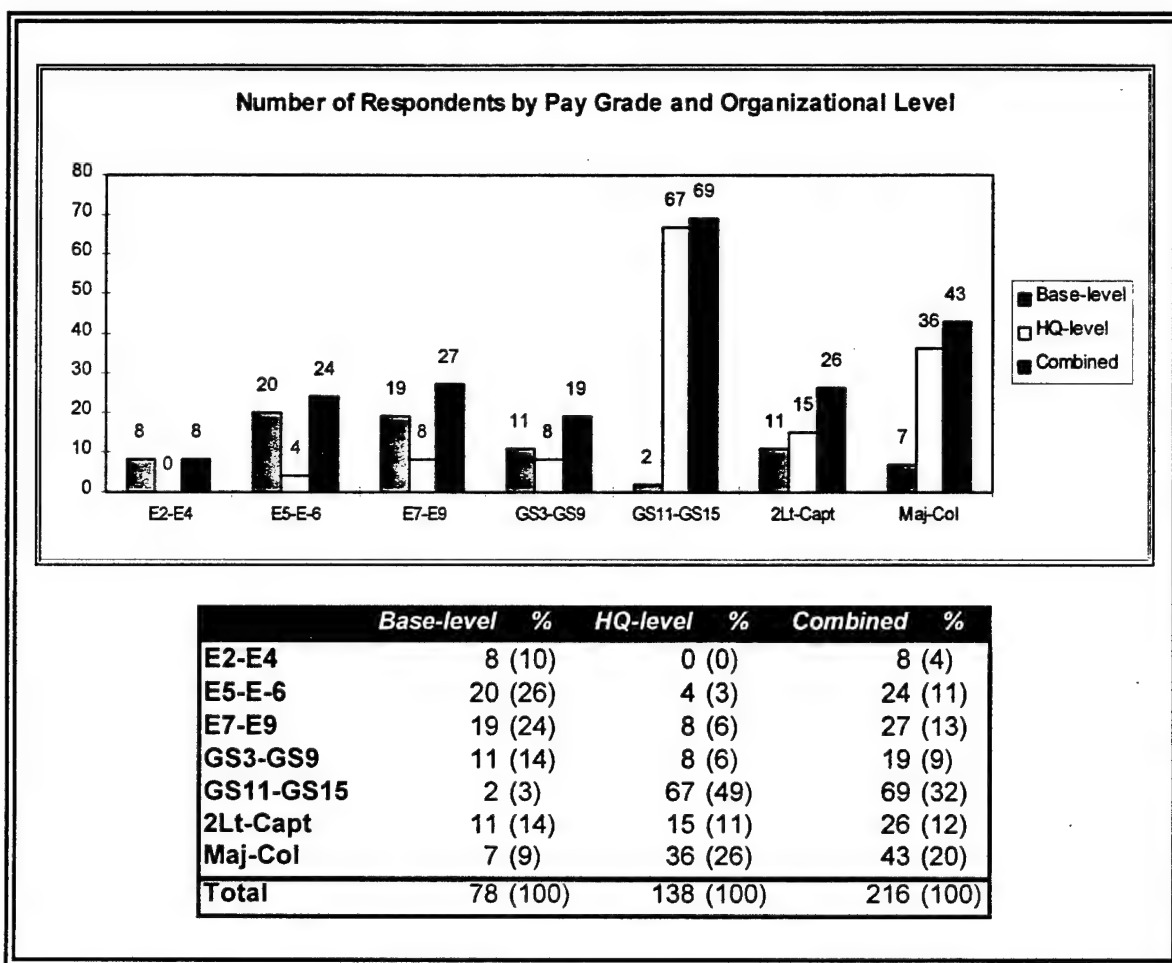


Figure 2: Number of Respondents by Pay Grade and Organizational Level

Figure 2 shows that of 216 Internet users surveyed, 8 (4 percent) are in the rank of E-2 through E-4, 24 (11 percent) are in the rank of E-5 through E-6, 27 (13 percent) are in the rank of E-7 through E-9, 19 (9 percent) are civilians in the grade of GS-3 through GS-9, 69 (32 percent) are civilians in the grade of GS-11 through GS-15, 26 (12 percent) are officers in the rank of 2nd Lieutenant and Captain, and 43 (20 percent) are officers in the rank of Major through Colonel.

Figure 2 also shows that of 138 Headquarters-level Internet users surveyed, no persons responded in the rank of E-2 through E-4, only 4

individuals (3 percent) are in the rank of E-5 through E-6, 8 (6 percent) are in the rank of E-7 through E-9, 8 (6 percent) are civilians in the grade of GS-3 and GS-9, 67 (49 percent) are civilians in the grade of GS-11 through GS-15, 15 (10 percent) are officers in the rank of 2nd Lieutenant through Captain, and 36 (26 percent) are officers in the rank of Major through Colonel.

Figure 2 shows that of 78 base-level Internet users surveyed, 8 (10 percent) are in the rank of E-2 through E-4, 20 (26 percent) are in the rank of E-5 through E-6, 19 (24 percent) are in the rank of E-7 through E-9, 11 (14 percent) are civilians in the grade of GS-3 and GS-9, only 2 (3 percent) are civilians in the grade of GS-11 through GS-15, 11 (14 percent) are officers in the rank of 2nd Lieutenant through Captain, and 7 (9 percent) are officers in the rank of Major through Colonel.

	<i>Yrs current job</i>	<i>STD</i>	<i>Yrs fed/mil service</i>	<i>STD</i>
Base-level	2.52	(1.71)	14.1	(6.2)
HQ-level	3.57	(3.95)	18.4	(7.03)
Combined	3.19	(3.35)	16.9	(7.06)

Table 1. Years in current job; Years in service; Mean (STD)

Table 1 shows survey respondents at HQ AFMC average just over three and a half years in their current job (with a standard deviation of nearly 4 years), compared with two and half years (with a standard deviation of 1.7 years) at base-level. The figure also shows that the average time in service (federal or military) is 18 years for HQ-level (with a standard deviation of 7 years) versus 14 years (with a 6 year standard deviation) for base-level respondents.

Survey Instrument--Section II. This section of the survey asked the respondent to check the appropriate box (either "yes" or "no") in answer to questions pertaining to computer use and Internet access at work and home. The results are presented below.

Section II Questions	Base-level				HQ-Level				Combined			
	Yes	%	No	%	Yes	%	No	%	Yes	%	No	%
1. Do you routinely use a computer in the course of your work?	97	(98)	2	(2)	145	(99)	1	(1)	242	(99)	3	(1)
2. Do you have a computer on your desk?	96	(97)	3	(3)	146	(100)	0	(0)	242	(99)	3	(1)
3. Do you use a computer at home?	73	(74)	25	(25)	107	(73)	33	(23)	180	(73)	63	(26)
3.a. Do you have a personal Internet service provider?	34	(34)	11	(11)	56	(38)	34	(23)	90	(37)	46	(19)
4. Does the computer you use at work have Internet access?	65	(66)	33	(33)	144	(99)	0	(0)	209	(85)	33	(13)
5. Can you access the Internet if you need it?	23	(23)	10	(10)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6. Do you feel that Internet access at your desk would be beneficial?	17	(17)	17	(17)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Table 2. Responses to Section II Questions

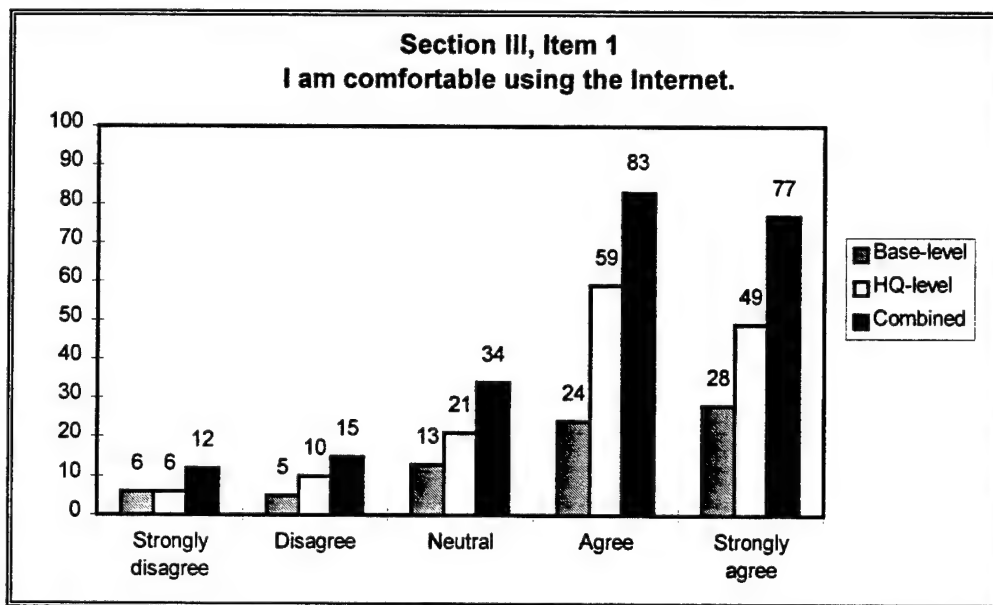
Table 2 shows that of all survey respondents, 99 percent routinely use a computer in the course of their work and also have computers on their desk. The figure goes on to show that of 180 respondents who use a computer at home, 90 (50 percent) also report having a personal Internet service provider. Fully 209 (85 percent) of those surveyed have access to the Internet at the computer they use at work, and 23 (23 percent) can get access to the Internet if they need it⁵. Seventeen base-level individuals without access to the Internet at their desk felt it would be beneficial to have access at their desk. An additional 17 base-level individuals felt Internet access would not be beneficial to them.⁶

⁵ Only base-level individuals without Internet access responded to this question.

⁶ Some respondents who currently *do* have Internet access responded "No" to this question.

Eleven individuals made comments in the space provided in Question 6, elaborating on whether the Internet access would be beneficial in their work or not. Those comments are presented in Appendix B.

Survey Instrument--Section III. This section of the survey asked respondents to indicate their feelings regarding 16 statements. The available responses were: 1--Strongly disagree, 2--Disagree, 3--Neutral, 4--Agree, and 5--Strongly agree. The majority of the statements dealt with user acceptance of Internet technology, such as "I am comfortable using the Internet" and "I enjoy using the Internet to accomplish my job." Other statements concerned Internet training, the impact of the technology on workload, and supervisor encouragement of the technology's use. Responses to Section III are presented below.



	Base-level	%	HQ-level	%	Combined	%
Strongly disagree	6	(8)	6	(4)	12	(5)
Disagree	5	(7)	10	(7)	15	(7)
Neutral	13	(17)	21	(14)	34	(15)
Agree	24	(32)	59	(41)	83	(38)
Strongly agree	28	(37)	49	(34)	77	(35)
Total	76	(100)	145	(100)	221	(100)

	Base-level	HQ-level	Combined
Mean	3.83	3.92	3.89
Median	4	4	4
Mode	5	4	4

Figure 3: I am comfortable using the Internet.

Figure 3 shows that of 221 Internet users surveyed, 160 (73 percent) either agree or strongly agree they are comfortable using the Internet. Twenty-seven (12 percent) disagree or strongly disagree that they are comfortable using the Internet, while 34 (15 percent) are neutral.

Figure 3 shows that of 145 HQ-level Internet users surveyed, 108 (75 percent) either agree or strongly agree they are comfortable using the Internet. Sixteen (11 percent) disagree or strongly disagree that they are comfortable using the Internet, while 21 (14 percent) are neutral.

Figure 3 shows that of 76 base-level Internet users surveyed, 52 (68 percent) either agree or strongly agree they are comfortable using the Internet. Eleven (15 percent) disagree or strongly disagree that they are comfortable using the Internet, while 13 (17 percent) are neutral.

The combined mean score of 3.89, along with the combined median and mode of 4, indicates that the users surveyed are comfortable using the Internet.

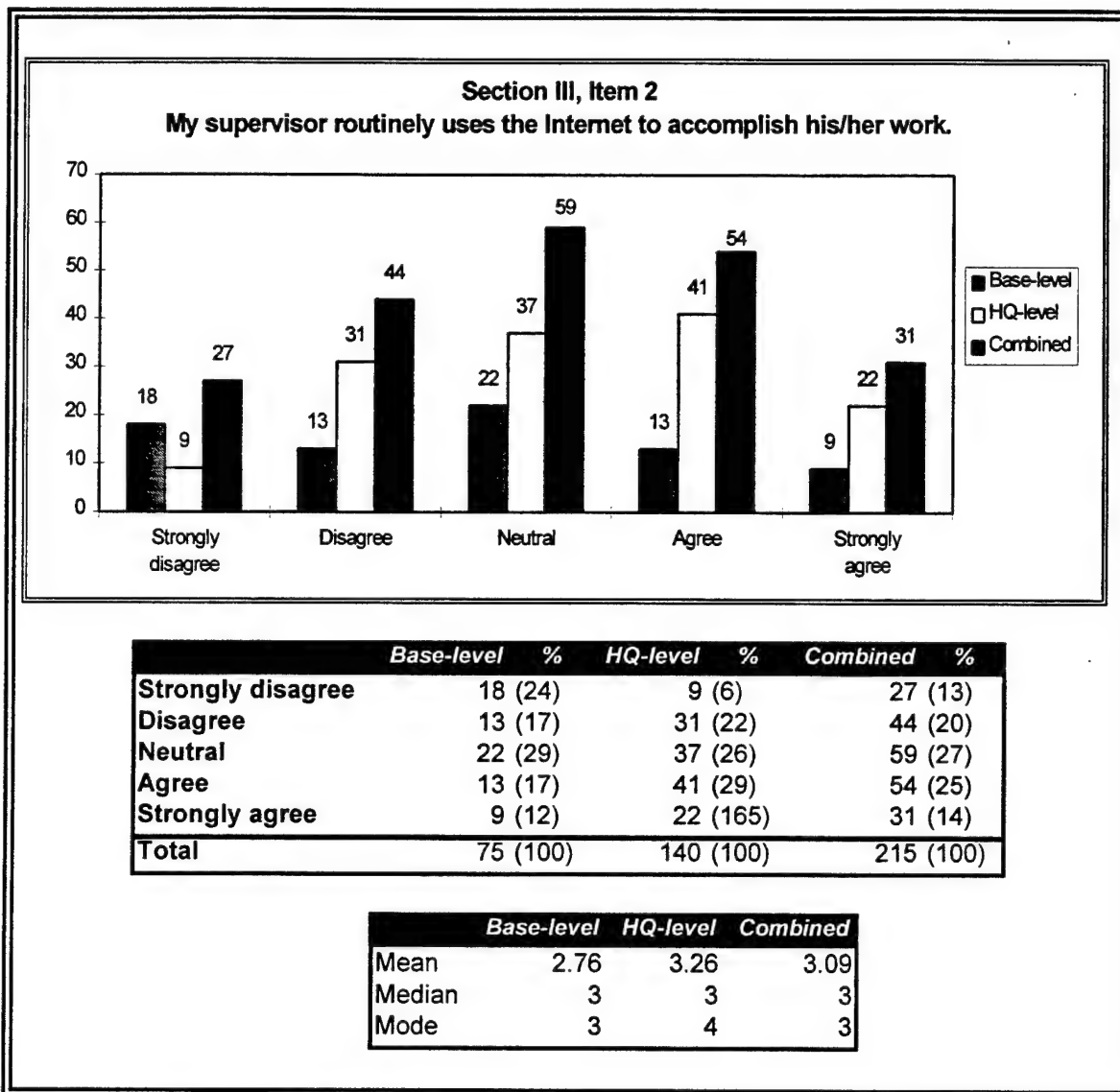


Figure 4: My supervisor routinely uses the Internet to accomplish his/her work.

Figure 4 shows that of 215 Internet users surveyed, 85 (40 percent) either agree or strongly agree their supervisor routinely uses the Internet to accomplish his/her job. Seventy-one (33 percent) disagree or strongly disagree that their supervisor routinely uses the Internet to accomplish his/her job, while 59 (27 percent) are neutral.

Figure 4 shows that of 140 Headquarters-level Internet users surveyed, 63 (45 percent) either agree or strongly agree their supervisor routinely uses the Internet to accomplish his/her job. Forty (28 percent) disagree or strongly disagree that their supervisor routinely uses the Internet to accomplish his/her job, while 37 (26 percent) are neutral.

Figure 4 shows that of 74 base-level Internet users surveyed, 22 (29 percent) either agree or strongly agree their supervisor routinely uses the Internet to accomplish his/her job. 31 (41 percent) disagree or strongly disagree that their supervisor routinely uses the Internet to accomplish his/her job, while 22 (29 percent) are neutral.

The combined mean score of 3.09, along with median and mode scores of 3, indicates that users at both organizational levels surveyed are neutral regarding their perception of their supervisor's Internet use.

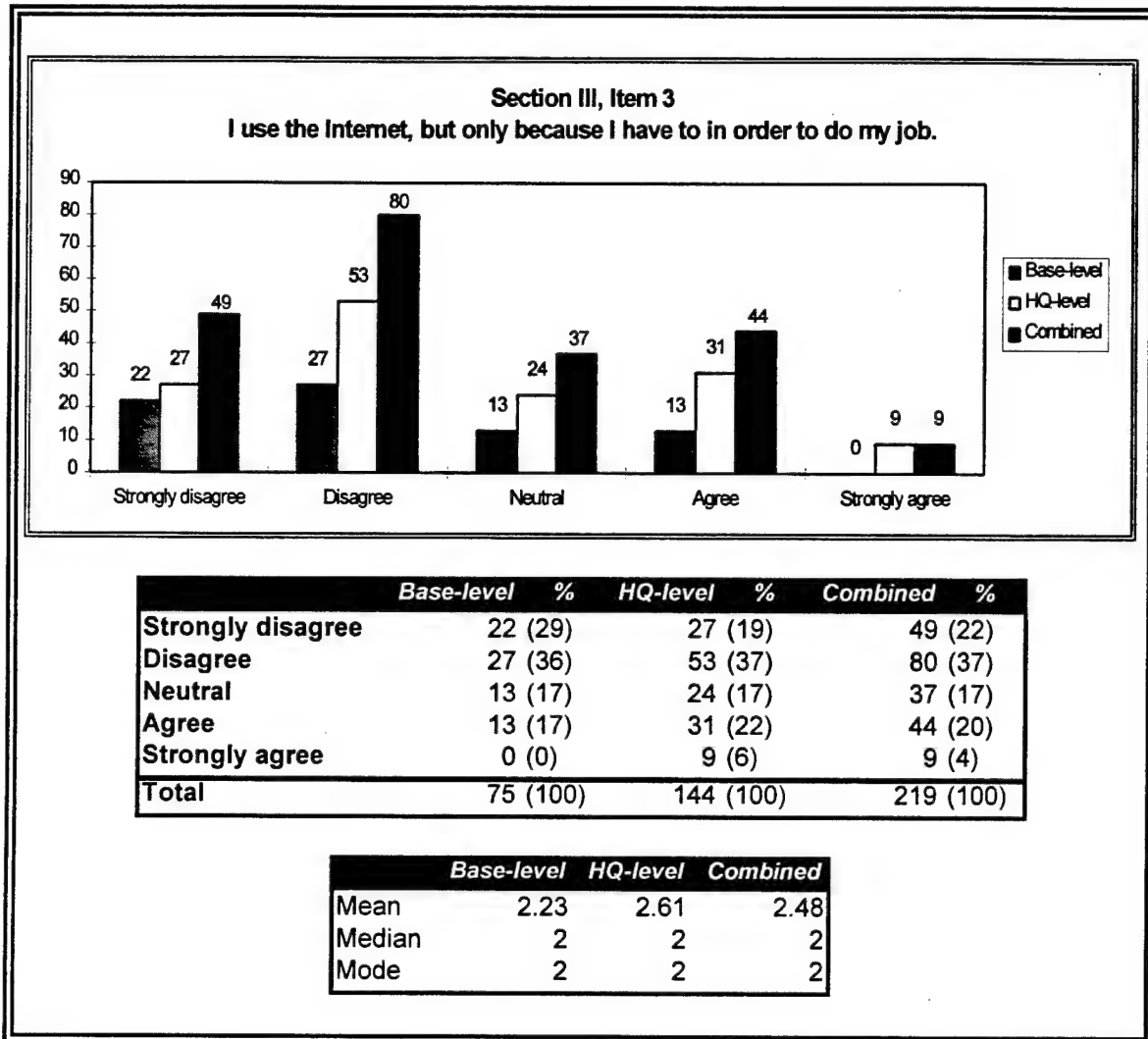


Figure 5: I use the Internet, but only because I have to in order to accomplish certain aspects of my job.

Figure 5 shows that of 219 Internet users surveyed, 53 (24 percent) either agree or strongly agree they only use the Internet because they have to in order to accomplish certain aspects of their job. One hundred twenty-nine (59 percent) disagree or strongly disagree that they only use the Internet because they have to in order to accomplish certain aspects of their job, while 37 (17 percent) are neutral.

Figure 5 shows that of 144 Headquarters-level Internet users surveyed, 40 (28 percent) either agree or strongly agree they only use the Internet because they have to in order to accomplish certain aspects of their job. Eighty (56 percent) disagree or strongly disagree that they only use the Internet because they have to in order to accomplish certain aspects of their job, while 24 (17 percent) are neutral.

Figure 5 shows that of 75 base-level Internet users surveyed, 13 (17 percent) either agree or strongly agree they only use the Internet because they have to in order to accomplish certain aspects of their job. Forty-nine (65 percent) disagree or strongly disagree that they only use the Internet because they have to in order to accomplish certain aspects of their job, while 13 (17 percent) are neutral.

The combined mean score of 2.48, along with a median of 2 and a mode of 2 indicates that the majority of those surveyed disagree with the above statement. Two different inferences may be drawn regarding the response to this item--some respondents may have answered negatively because they do *not* use the Internet at all. Others may have answered negatively because they use the Internet, not because they *have to* but because they *want to* in order to accomplish their job.

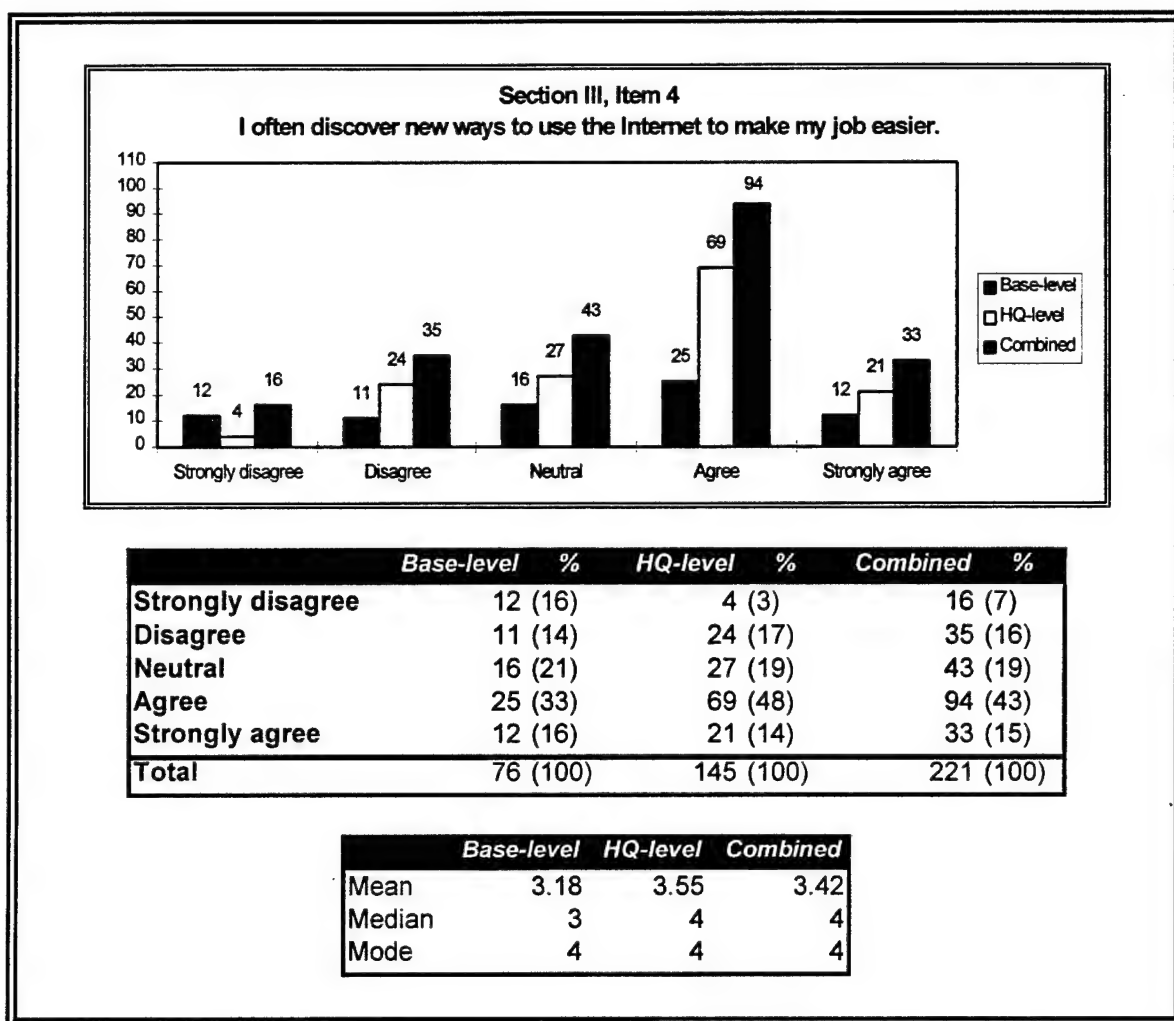


Figure 6: I often discover new ways to use the Internet to make my job easier.

Figure 6 shows that of 221 Internet users surveyed, 127 (58 percent) either agree or strongly agree they often discover new ways to use the Internet to make their job easier. Fifty-one (23 percent) disagree or strongly disagree that they often discover new ways to use the Internet to make their job easier, while 43 (19 percent) are neutral.

Figure 6 shows that of 145 Headquarters-level Internet users surveyed, 90 (62 percent) either agree or strongly agree they often discover new ways to

use the Internet to make their job easier. Twenty-eight (19 percent) disagree or strongly disagree that they often discover new ways to use the Internet to make their job easier, while 27 (19 percent) are neutral.

Figure 6 shows that of 76 base-level Internet users surveyed, 37 (49 percent) either agree or strongly agree they often discover new ways to use the Internet to make their job easier. Twenty-three (30 percent) disagree or strongly disagree that they often discover new ways to use the Internet to make their job easier, while 16 (21 percent) are neutral.

The combined mean score of 3.42, along with mean and mode scores of 4, indicates, in general, most respondents agree they often discover new ways to use the Internet.

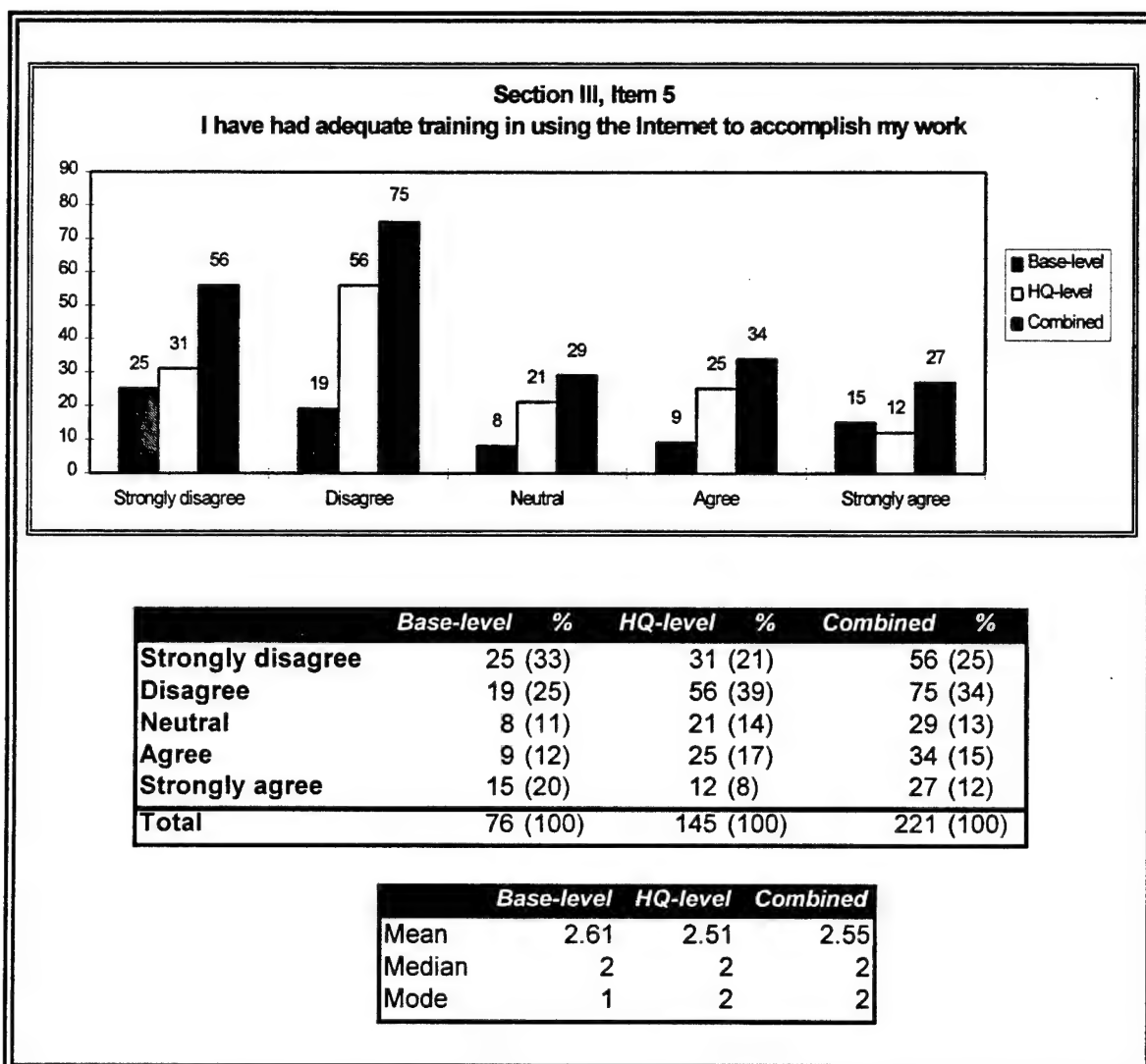


Figure 7: I have had adequate training in using the Internet to accomplish my work.

Figure 7 shows that of 221 Internet users surveyed, 61 (28 percent) either agree or strongly agree they have had adequate training in using the Internet to accomplish their work. One hundred thirty-one (59 percent) disagree or strongly disagree that they have had adequate training in using the Internet to accomplish their work, while 29 (13 percent) are neutral.

Figure 7 shows that of 145 Headquarters-level Internet users surveyed, 37 (26 percent) either agree or strongly agree they have had adequate training in using the Internet to accomplish their work. Eighty-seven (60 percent) disagree or strongly disagree that they have had adequate training in using the Internet to accomplish their work, while 21 (14 percent) are neutral.

Figure 7 shows that of 76 base-level Internet users surveyed, 24 (31 percent) either agree or strongly agree they have had adequate training in using the Internet to accomplish their work. Forty-four (58 percent) disagree or strongly disagree that they have had adequate training in using the Internet to accomplish their work, while 8 (11 percent) are neutral.

The mean, median, and mode scores at both organizational levels strongly indicate that users have *not* had adequate training in using the Internet.

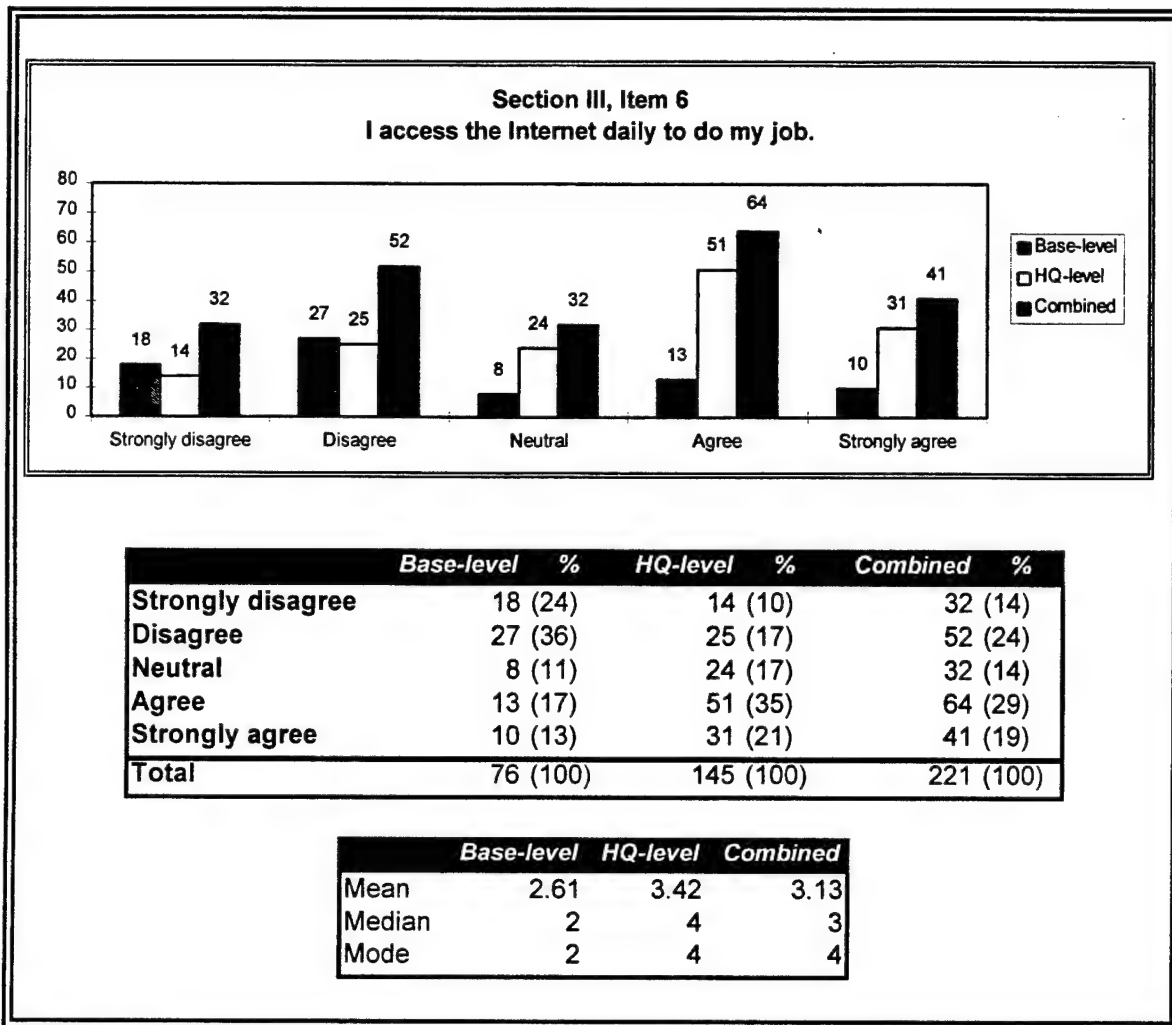


Figure 8: I access the Internet daily to do my job.

Figure 8 shows that of 221 Internet users surveyed, 105 (48 percent) either agree or strongly agree they access the Internet daily to do their job. Eighty-four (38 percent) disagree or strongly disagree that they access the Internet daily to do their job, while 32 (14 percent) are neutral.

Figure 8 shows that of 145 Headquarters-level Internet users surveyed, 82 (57 percent) either agree or strongly agree they access the Internet to do their job. Thirty-nine (27 percent) disagree or strongly disagree that they access the Internet daily to do their job, while 24 (17 percent) are neutral.

Figure 8 shows that of 76 base-level Internet users surveyed, 23 (30 percent) either agree or strongly agree they access the Internet daily to do their job. Forty-five (60 percent) disagree or strongly disagree that they access the Internet daily to do their job, while 8 (10 percent) are neutral.

The combined mean score of 3.13 tends to indicate that many respondents were neutral regarding the above statement. However, the median and mode of 2 at base-level contrasts strongly with the median and mode of 4 at headquarters-level. These numbers indicate that headquarters-level individuals are more likely to access the Internet daily than those at base-level.

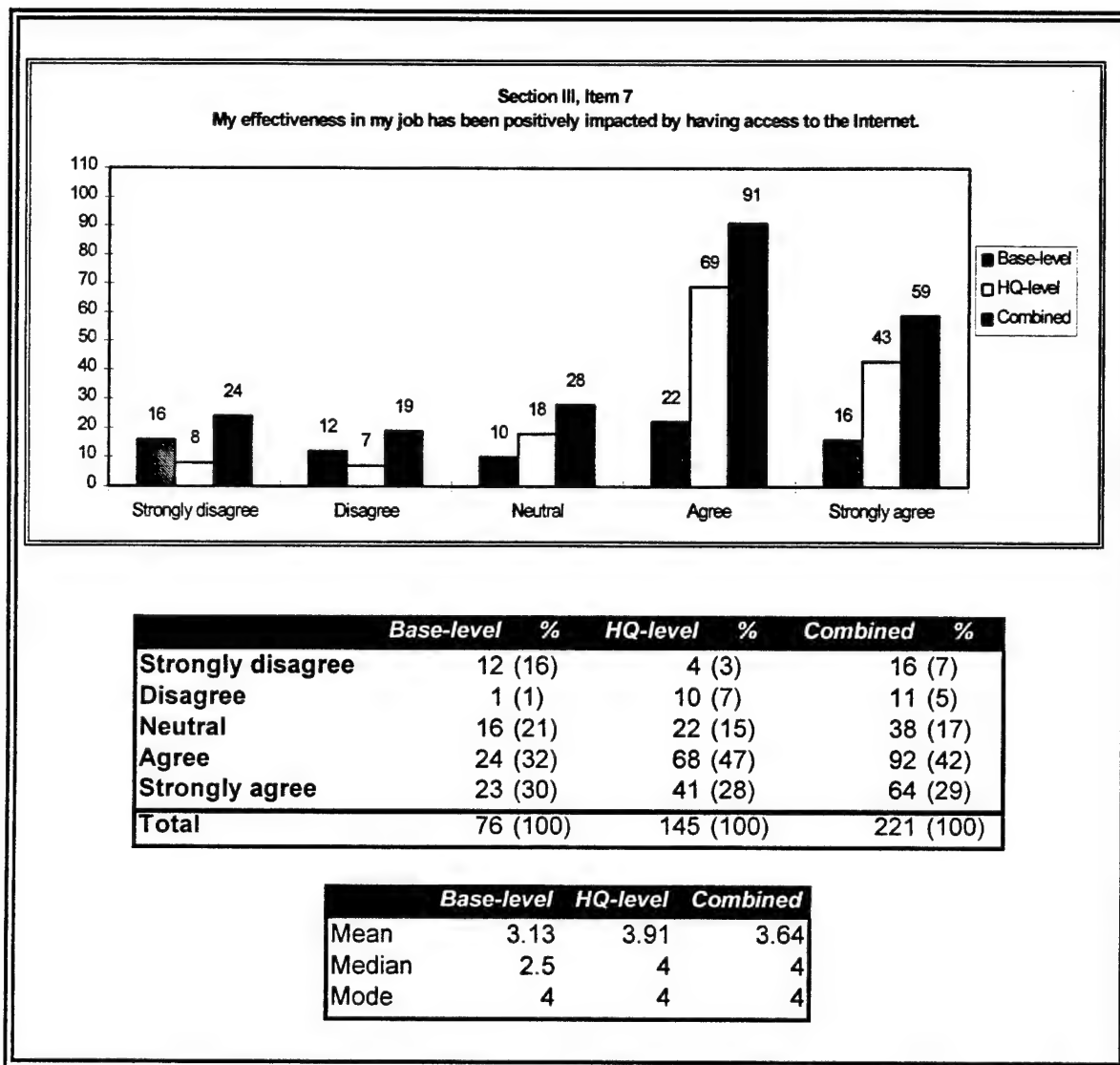


Figure 9. My effectiveness in my job has been positively impacted by having access to the Internet.

Figure 9 shows that of 221 Internet users surveyed, 150 (68 percent) either agree or strongly agree their effectiveness in their job has been positively impacted by having access to the Internet. Forty-three (19 percent) disagree or strongly disagree that their effectiveness in their job has been positively impacted by having access to the Internet, while 28 (13 percent) are neutral.

Figure 9 shows that of 145 Headquarters-level Internet users surveyed, 112 (78 percent) either agree or strongly agree their effectiveness in their job has been positively impacted by having access to the Internet. Fifteen (11 percent) disagree or strongly disagree that their effectiveness in their job has been positively impacted by having access to the Internet, while 18 (12 percent) are neutral.

Figure 9 shows that of 76 base-level Internet users surveyed, 38 (50 percent) either agree or strongly agree their effectiveness in their job has been positively impacted by having access to the Internet. Twenty-eight (37 percent) disagree or strongly disagree that their effectiveness in their job has been positively impacted by having access to the Internet, while 10 (13 percent) are neutral.

The combined mean score of 3.64 indicates that overall, the individuals surveyed tend to agree their effectiveness on the job has been positively impacted by having access to the Internet. The median score of 2.5 at base-level and 4 at headquarters-level indicates a greater number of those at headquarters believe the Internet has made a positive impact on their effectiveness in their job.

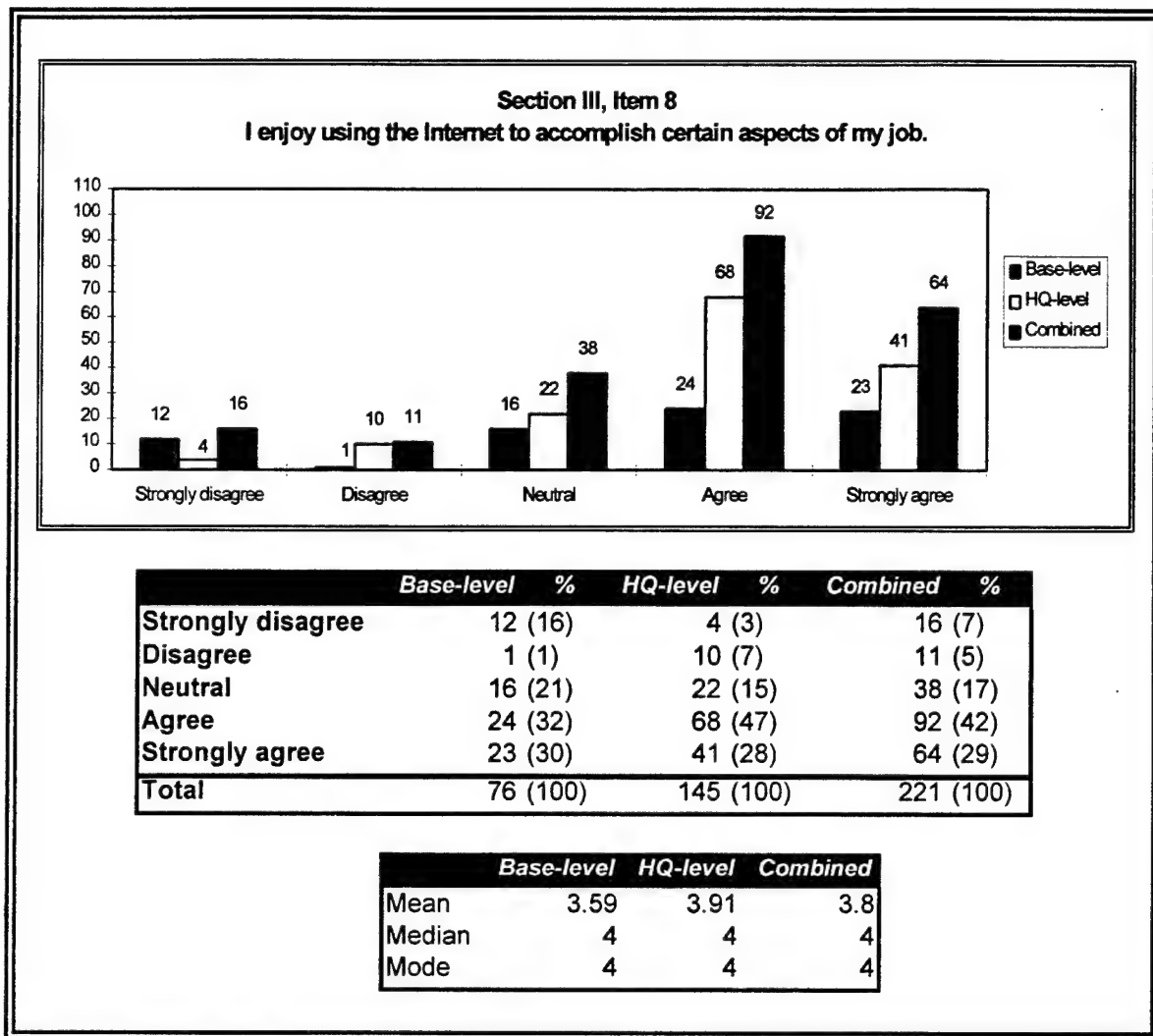


Figure 10: I enjoy using the Internet to accomplish my job.

Figure 10 shows that of 221 Internet users surveyed, 156 (71 percent) either agree or strongly agree they enjoy using the Internet to accomplish certain aspects of their job. Twenty-seven (12 percent) disagree or strongly disagree that they enjoy using the Internet to accomplish certain aspects of their job, while 38 (17 percent) are neutral.

Figure 10 shows that of 145 Headquarters-level Internet users surveyed, 109 (75 percent) either agree or strongly agree they enjoy using the Internet to

accomplish certain aspects of their job. Fourteen (10 percent) disagree or strongly disagree that they enjoy using the Internet to accomplish certain aspects of their job, while 22 (15 percent) are neutral.

Figure 10 shows that of 76 base-level Internet users surveyed, 47 (62 percent) either agree or strongly agree they enjoy using the Internet to accomplish certain aspects of their job. Thirteen (17 percent) disagree or strongly disagree that they enjoy using the Internet to accomplish certain aspects of their job, while 16 (21 percent) are neutral.

The mean, median, and mode scores shown above indicate the majority of respondents surveyed enjoy using the Internet to accomplish their job.

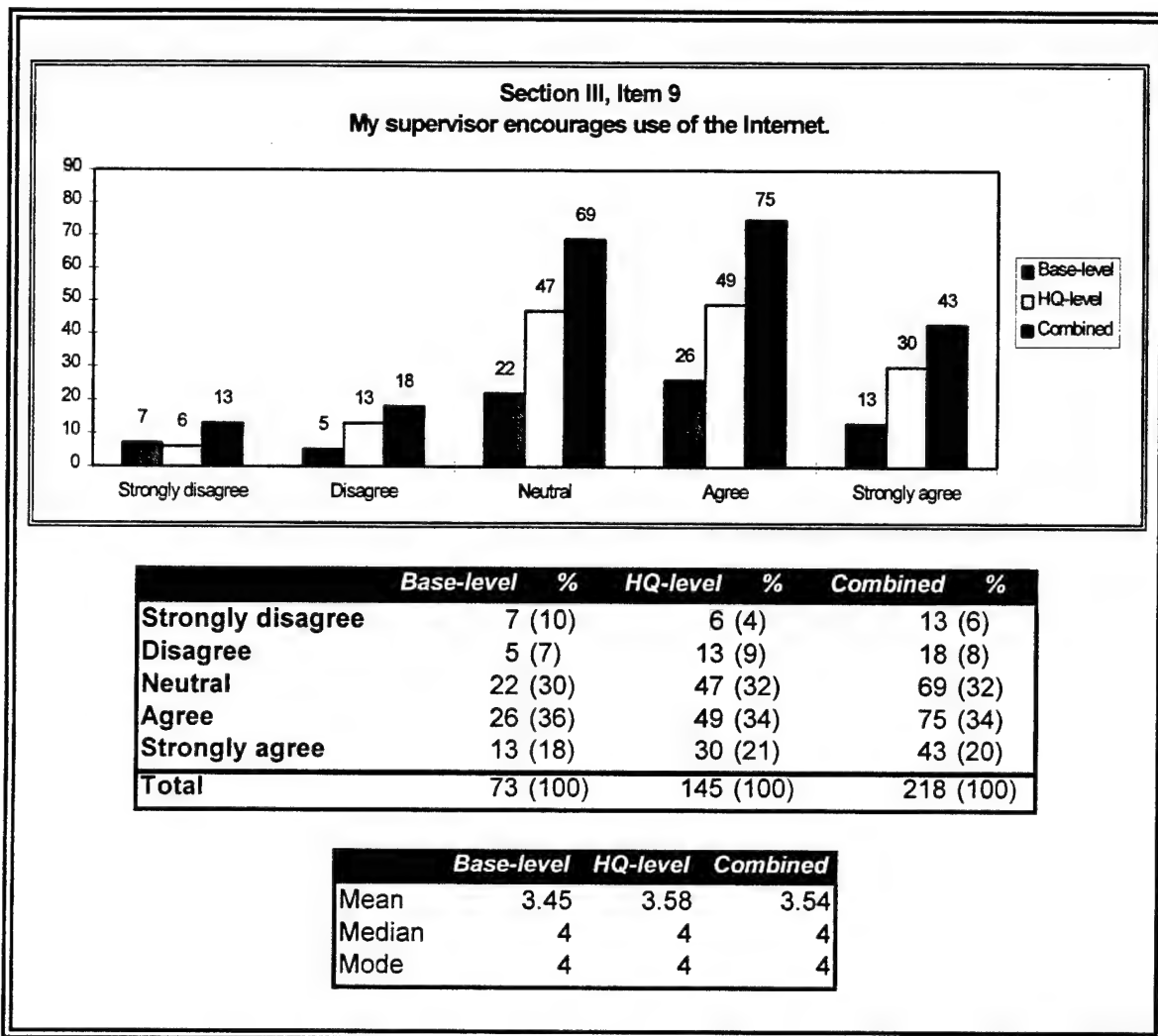


Figure 11: My supervisor encourages use of the Internet.

Figure 11 shows that of 218 Internet users surveyed, 118 (54 percent) either agree or strongly agree their supervisor encourages use of the Internet. Thirty-one (14 percent) disagree or strongly disagree that their supervisor encourages use of the Internet, while 69 (32 percent) are neutral.

Figure 11 shows that of 145 Headquarters-level Internet users surveyed, 79 (55 percent) either agree or strongly agree their supervisor encourages use of

the Internet. Nineteen (13 percent) disagree or strongly disagree that their supervisor encourages use of the Internet, while 47 (32 percent) are neutral.

Figure 11 shows that of 73 base-level Internet users surveyed, 39 (53 percent) either agree or strongly agree their supervisor encourages use of the Internet. Twelve (17 percent) disagree or strongly disagree that their supervisor encourages use of the Internet, while 22 (30 percent) are neutral.

The mean, median, and mode scores shown above indicate the majority of respondents surveyed believe their supervisor encourages use of the Internet.

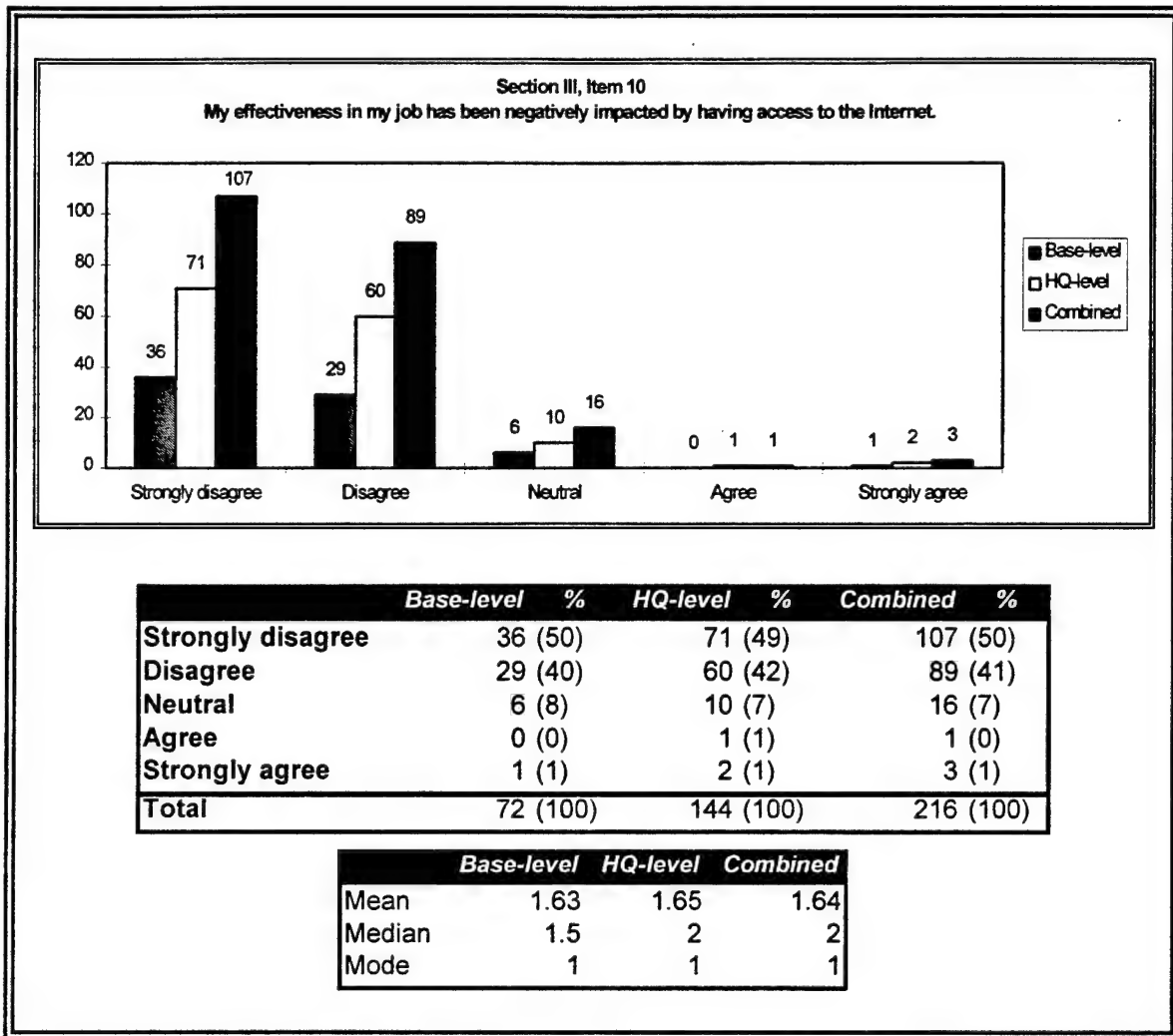


Figure 12: My effectiveness in my job has been negatively impacted by having access to the Internet.

Figure 12 shows that of 216 Internet users surveyed, 4 (2 percent) either agree or strongly agree their effectiveness in their job has been negatively impacted by having access to the Internet. One hundred ninety-six (91 percent) disagree or strongly disagree that their effectiveness in their job has been negatively impacted by having access to the Internet, while 16 (7 percent) are neutral.

Figure 12 shows that of 144 Headquarters-level Internet users surveyed, 3 (2 percent) either agree or strongly agree their effectiveness in their job has been negatively impacted by having access to the Internet. One hundred thirty-one (91 percent) disagree or strongly disagree that their effectiveness in their job has been negatively impacted by having access to the Internet, while 10 (7 percent) are neutral.

Figure 12 shows that of 72 base-level Internet users surveyed, 1 (1 percent) either agree or strongly agree their effectiveness in their job has been negatively impacted by having access to the Internet. Sixty-five (90 percent) disagree or strongly disagree that effectiveness in their job has been negatively impacted by having access to the Internet, while 6 (8 percent) are neutral.

The mean, median, and mode scores shown above strongly indicate respondents do not believe access to the Internet has had a negative impact on their effectiveness in their job.

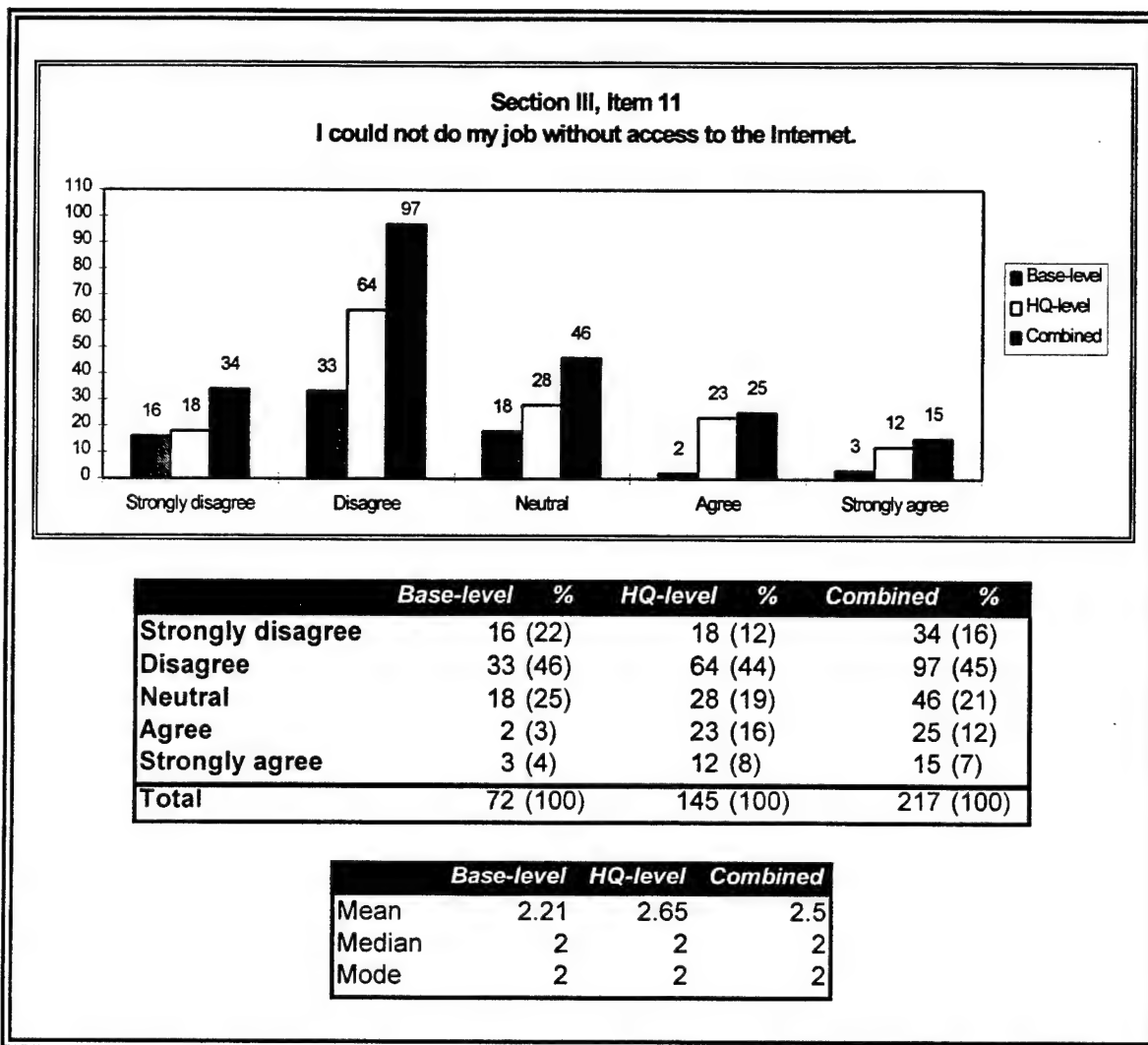


Figure 13: I could not do my job without access to the Internet.

Figure 13 shows that of 217 Internet users surveyed, 40 (19 percent) either agree or strongly agree they could not do their job without access to the Internet. One hundred thirty-one (60 percent) disagree or strongly disagree that they could not do their job without access to the Internet, while 46 (21 percent) are neutral.

Figure 13 shows that of 145 Headquarters-level Internet users surveyed, 35 (24 percent) either agree or strongly agree they could not do their job without

access to the Internet. Eighty-two (57 percent) disagree or strongly disagree that they could not do their job without access to the Internet, while 28 (19 percent) are neutral.

Figure 13 shows that of 72 base-level Internet users surveyed, 5 (7 percent) either agree or strongly agree they could not do their job without access to the Internet. Forty-nine (68 percent) disagree or strongly disagree that they could not do their job without access to the Internet, while 18 (25 percent) are neutral.

The combined mean, median, and mode scores shown above indicate most users surveyed feel they could still accomplish their job, even without access to the Internet.

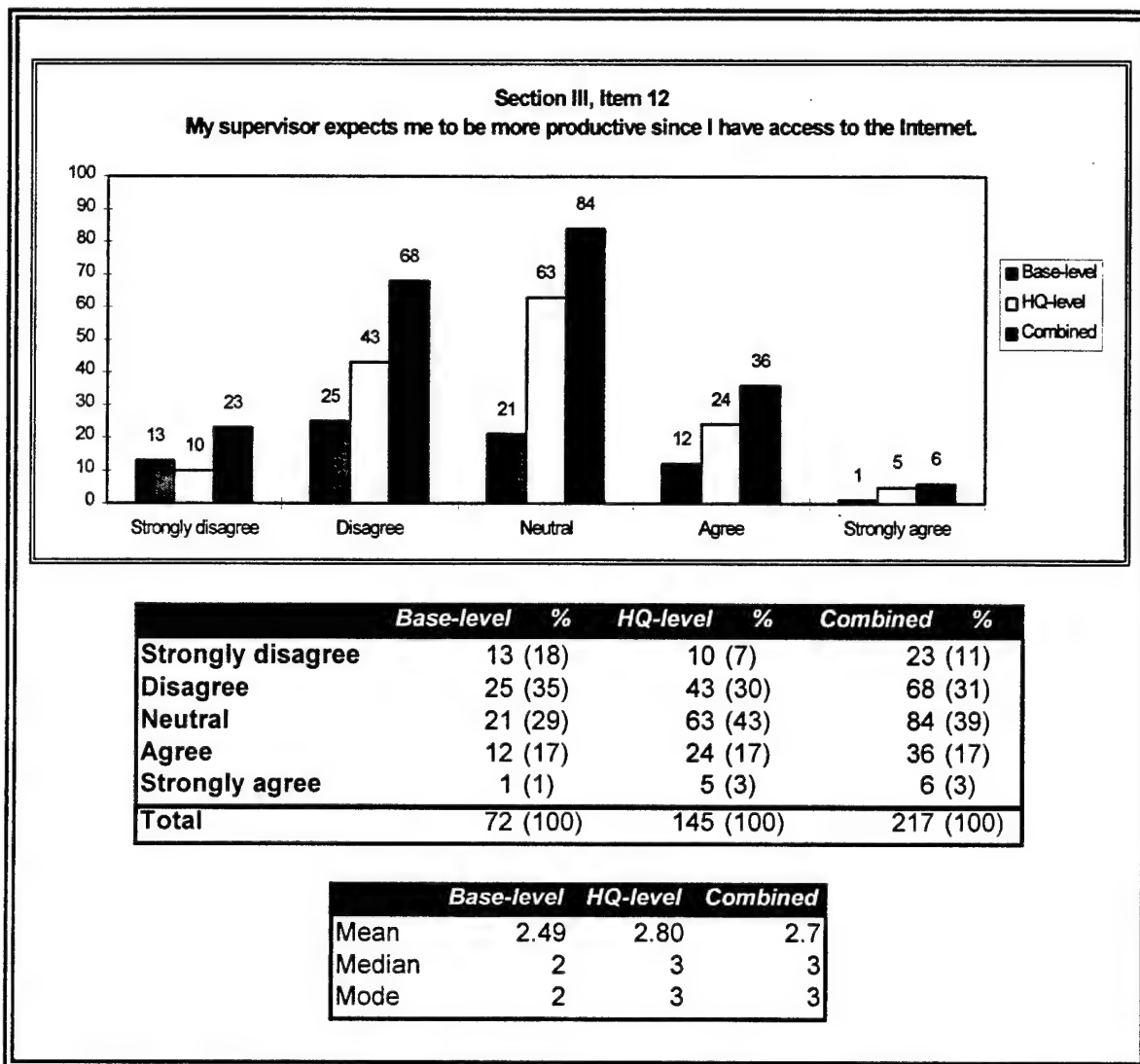


Figure 14: My supervisor expects me to be more productive since I have access to the Internet.

Figure 14 shows that of 217 Internet users surveyed, 42 (19 percent) either agree or strongly agree their supervisor expects them to be more productive since they have access to the Internet. Ninety-one (42 percent) disagree or strongly disagree that their supervisor expects them to be more productive since they have access to the Internet, while 84 (39 percent) are neutral.

Figure 14 shows that of 145 Headquarters-level Internet users surveyed, 29 (20 percent) either agree or strongly agree their supervisor expects them to be more productive since they have access to the Internet. Fifty-three (37 percent) disagree or strongly disagree that their supervisor expects them to be more productive since they have access to the Internet, while 63 (43 percent) are neutral.

Figure 14 shows that of 72 base-level Internet users surveyed, 13 (18 percent) either agree or strongly agree their supervisor expects them to be more productive since they have access to the Internet. Thirty-eight (52 percent) disagree or strongly disagree that their supervisor expects them to be more productive since they have access to the Internet, while 21 (29 percent) are neutral.

The combined mean score of 2.7, along with median and mode scores of 3 indicate that users at both organizational levels surveyed are neutral regarding their perception of their supervisor's productivity expectations.

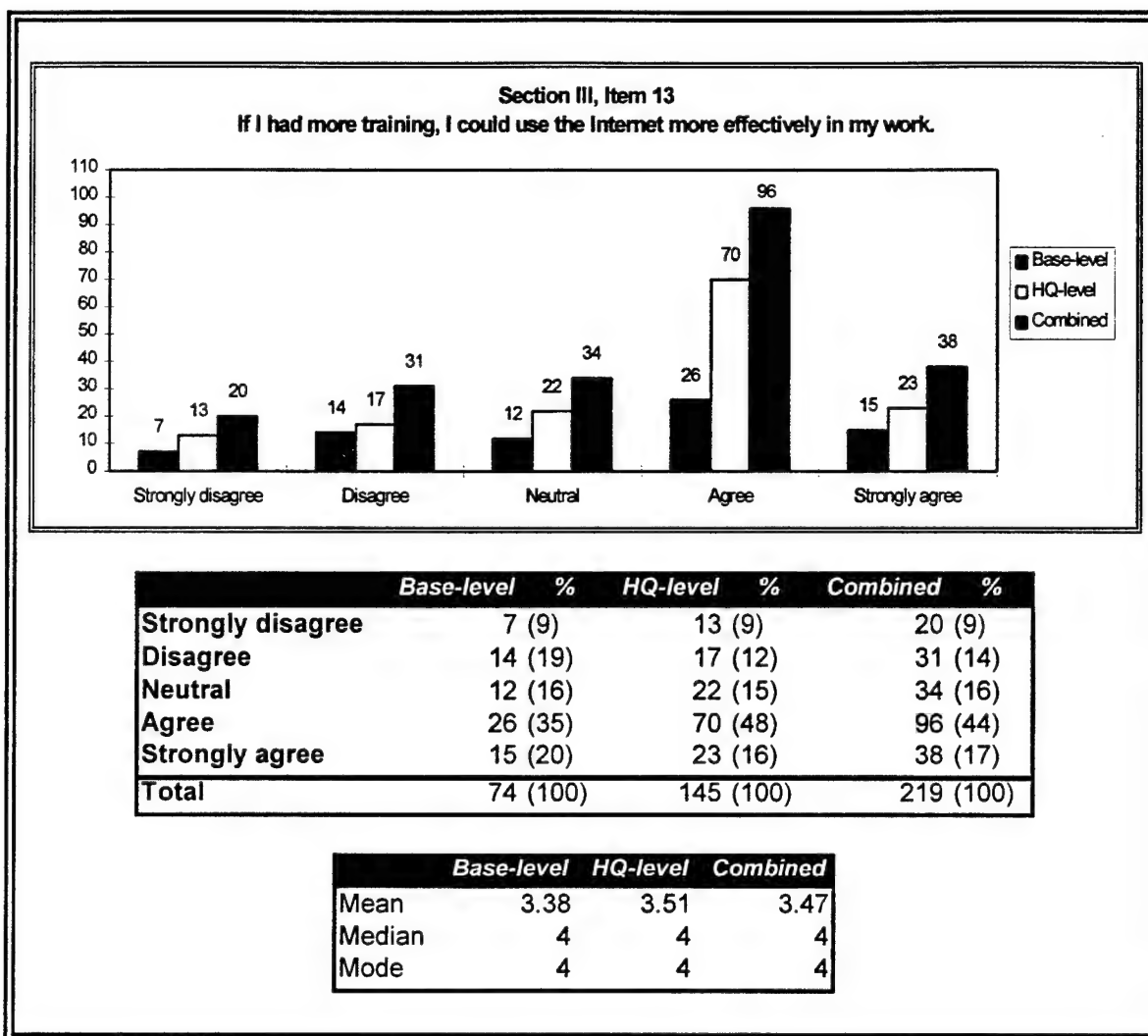


Figure 15: If I had more training, I could use the Internet more effectively to accomplish my work.

Figure 15 shows that of 219 Internet users surveyed, 134 (61 percent) either agree or strongly agree if they had more training, they could use the Internet more effectively to accomplish their work. Fifty-one (23 percent) disagree or strongly disagree that if they had more training, they could use the Internet more effectively to accomplish their work, while 34 (16 percent) are neutral.

Figure 15 shows that of 145 Headquarters-level Internet users surveyed, 93 (64 percent) either agree or strongly agree if they had more training, they could use the Internet more effectively to accomplish their work. Thirty (21 percent) disagree or strongly disagree that if they had more training, they could use the Internet more effectively to accomplish their work, while 22 (15 percent) are neutral.

Figure 15 shows that of 74 base-level Internet users surveyed, 41 (56 percent) either agree or strongly agree if they had more training, they could use the Internet more effectively to accomplish their work. Twenty-one (28 percent) disagree or strongly disagree that if they had more training, they could use the Internet more effectively to accomplish their work, while 12 (16 percent) are neutral.

The combined mean, median, and mode scores shown above indicate the majority of Internet users surveyed feel that, with more training on Internet use, they could be more effective in their jobs.

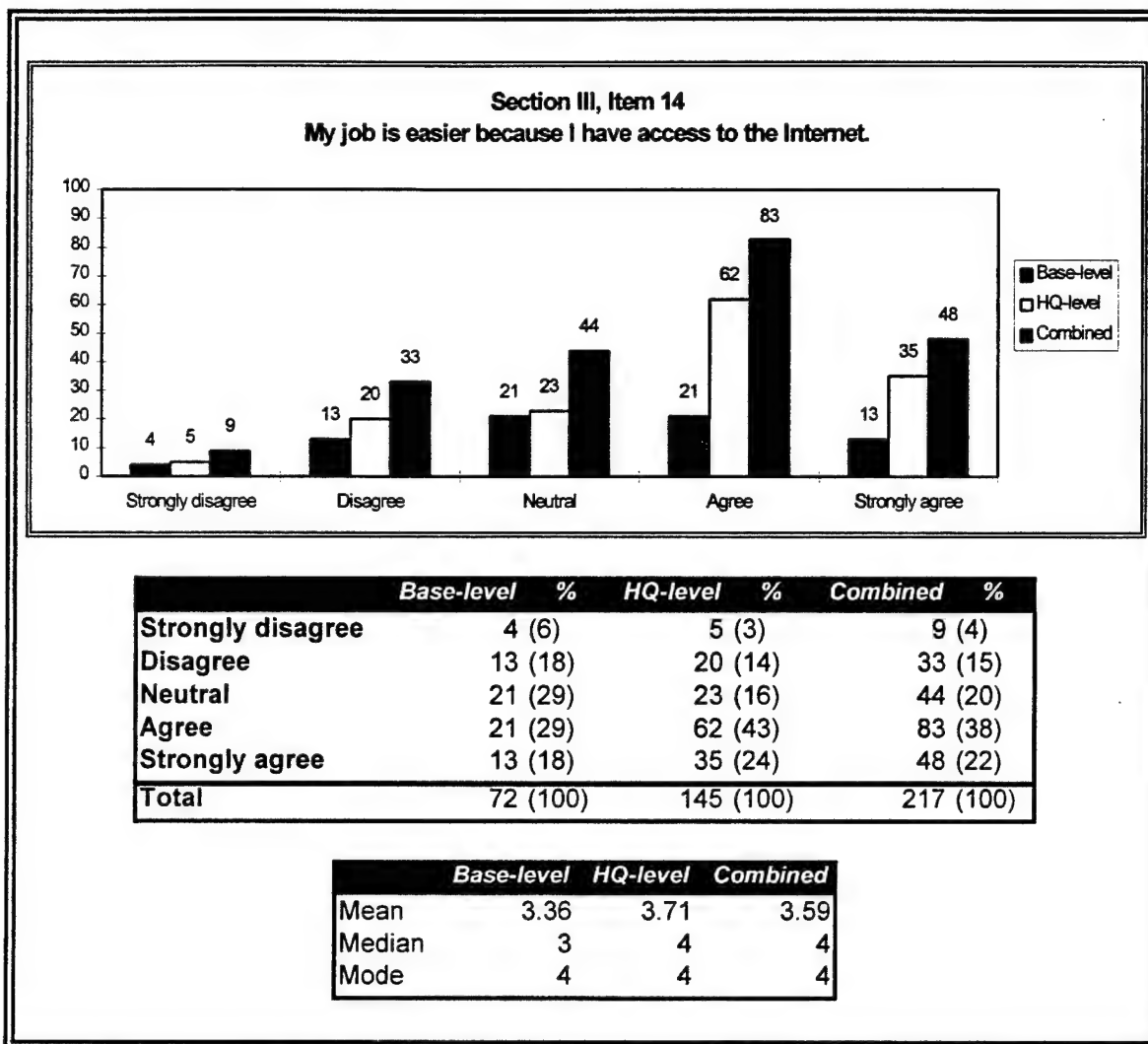


Figure 16: My job is easier because I have access to the Internet.

Figure 16 shows that of 217 Internet users surveyed, 131 (60 percent) either agree or strongly agree their job is easier because they have access to the Internet. Forty-two (19 percent) disagree or strongly disagree that their job is easier because they have access to the Internet, while 44 (20 percent) are neutral.

Figure 16 shows that of 145 Headquarters-level Internet users surveyed, 97 (67 percent) either agree or strongly agree their job is easier because they

have access to the Internet. Twenty-five (17 percent) disagree or strongly disagree that their job is easier because they have access to the Internet, while 23 (16 percent) are neutral.

Figure 16 shows that of 72 base-level Internet users surveyed, 34 (47 percent) either agree or strongly agree their job is easier because they have access to the Internet. Seventeen (24 percent) disagree or strongly disagree that their job is easier because they have access to the Internet, while 21 (29 percent) are neutral.

The combined mean, median, and mode scores shown above indicate the majority of Internet users surveyed feel that their job is easier because of access to the Internet.

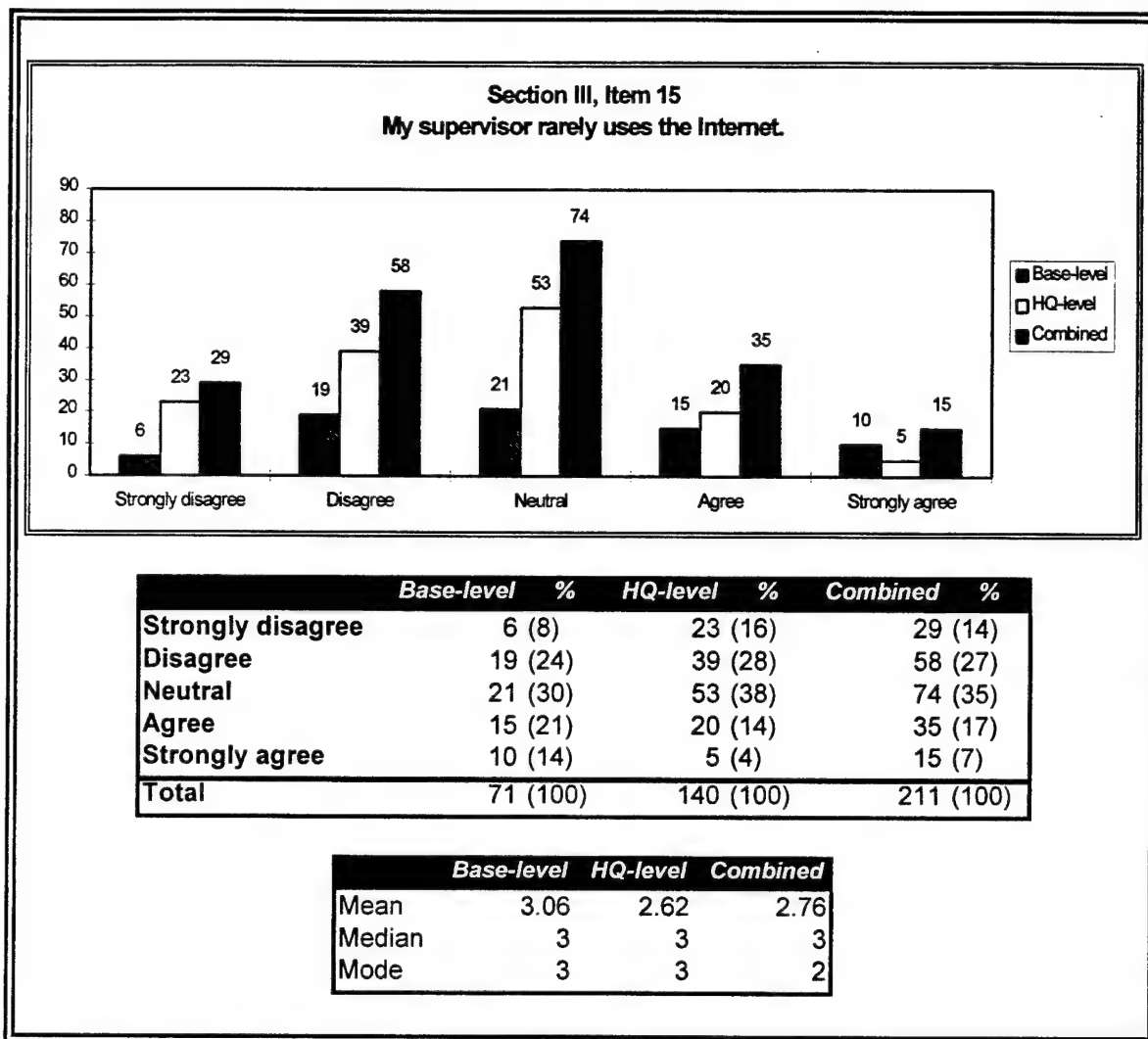


Figure 17: My supervisor rarely uses the Internet.

Figure 17 shows that of 211 Internet users surveyed, 50 (24 percent) either agree or strongly agree their supervisor rarely uses the Internet. Eighty-seven (41 percent) disagree or strongly disagree that their supervisor rarely uses the Internet, while 74 (35 percent) are neutral.

Figure 17 shows that of 140 Headquarters-level Internet users surveyed, 25 (18 percent) either agree or strongly agree their supervisor rarely uses the

Internet. Sixty-two (44 percent) disagree or strongly disagree that their supervisor rarely uses the Internet, while 53 (38 percent) are neutral.

Figure 17 shows that of 71 base-level Internet users surveyed, 25 (35 percent) either agree or strongly agree their supervisor rarely uses the Internet. Twenty-five (35 percent) disagree or strongly disagree that their supervisor rarely uses the Internet, while 21 (30 percent) are neutral.

The mean score of 3.06 and 2.62 at base and headquarters-level, along with median and mode scores of 3, indicate that users at both organizational levels surveyed are largely neutral regarding their perception of their supervisor's Internet use.

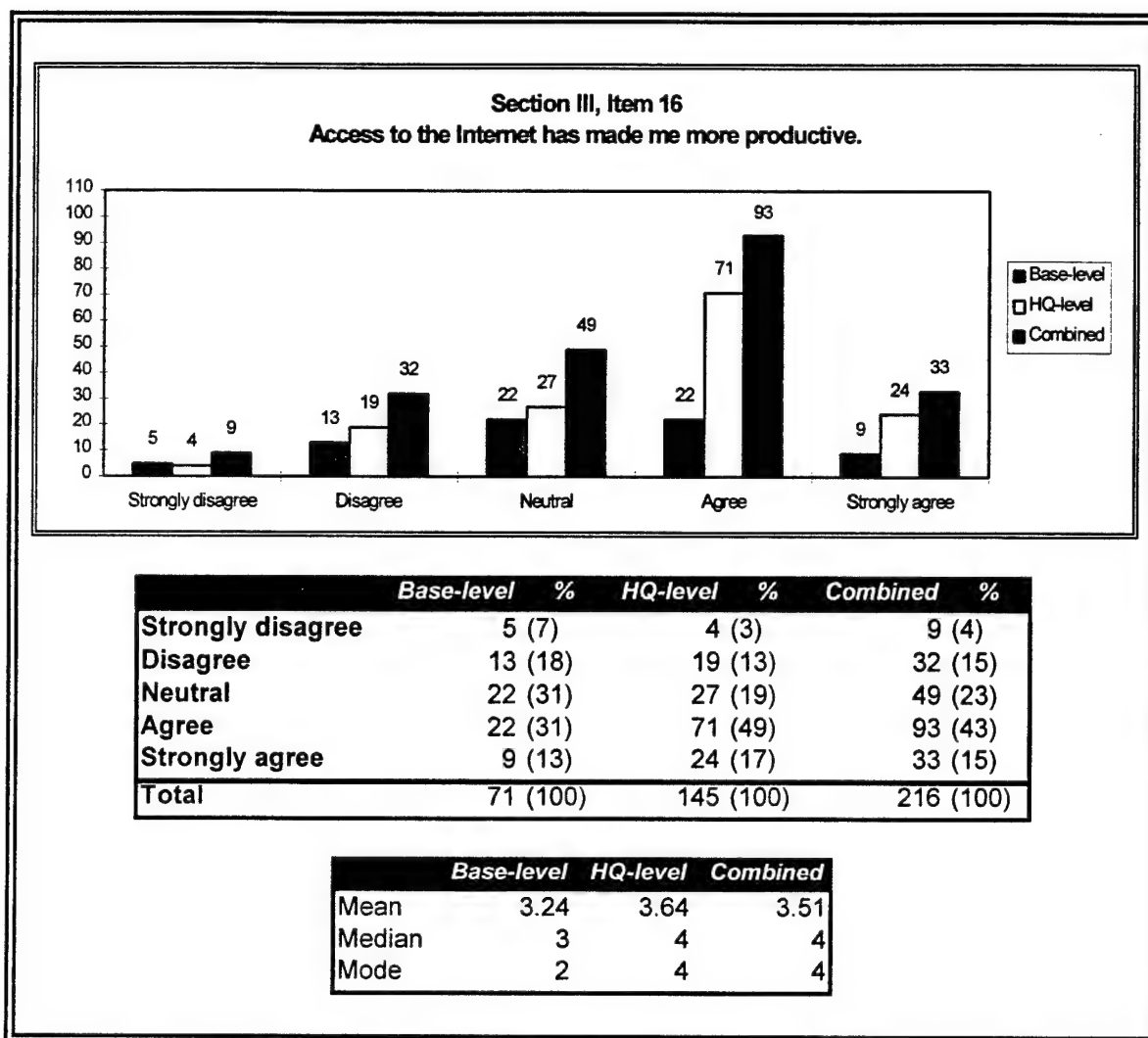


Figure 18: Access to the Internet has made me more productive.

Figure 18 shows that of 216 Internet users surveyed, 126 (58 percent) either agree or strongly agree access to the Internet has made them more productive. Forty-one (19 percent) disagree or strongly disagree that the Internet has made them more productive, while 49 (23 percent) are neutral.

Figure 18 shows that of 145 Headquarters-level Internet users surveyed, 95 (66 percent) either agree or strongly agree access to the Internet has made them more productive. Twenty-three (16 percent) disagree or strongly disagree

that the Internet has made them more productive, while 27 (19 percent) are neutral.

Figure 18 shows that of 71 base-level Internet users surveyed, 31 (44 percent) either agree or strongly agree access to the Internet has made them more productive. Eighteen (25 percent) disagree or strongly disagree that the Internet has made them more productive, while 22 (31 percent) are neutral.

The combined mean, median, and mode scores of 3.51, 4, and 4 respectively, would tend to indicate that, overall, survey respondents feel access to the Internet has made them more productive.

Survey Instrument--Section IV. This section of the survey asked respondents for information pertaining to the number of individuals in the respondent's immediate work area with computers on their desks and percentage of fellow workers with Internet access at their computers.

Section IV also asked for estimates of time spent using the Internet, time saved using the Internet (if any), and years of experience with the Internet. Additionally, respondents were asked for their perception of their organization's Internet use policy, and their perception of what the actual Internet use has been by individuals in their organization who frequently use the Internet.

This section went on to ask for percentages of Internet on-line time (excluding e-mail use) spent using various Internet applications and for what purposes the Internet was used.

Lastly, four open-ended questions were asked to obtain more detail as to *how* the respondents used the Internet, what potential applications for Internet

use they could foresee in the future, how they would accomplish their jobs *without* access to the Internet, and finally, what they believed Air Force policy *should be* regarding Internet use. Responses to questions 1 through 11 of Section IV are graphically illustrated below. Verbatim transcripts of the open-ended questions (12 through 15) and additional comments on question 11 are included in Appendices C, D, E, F, and G.

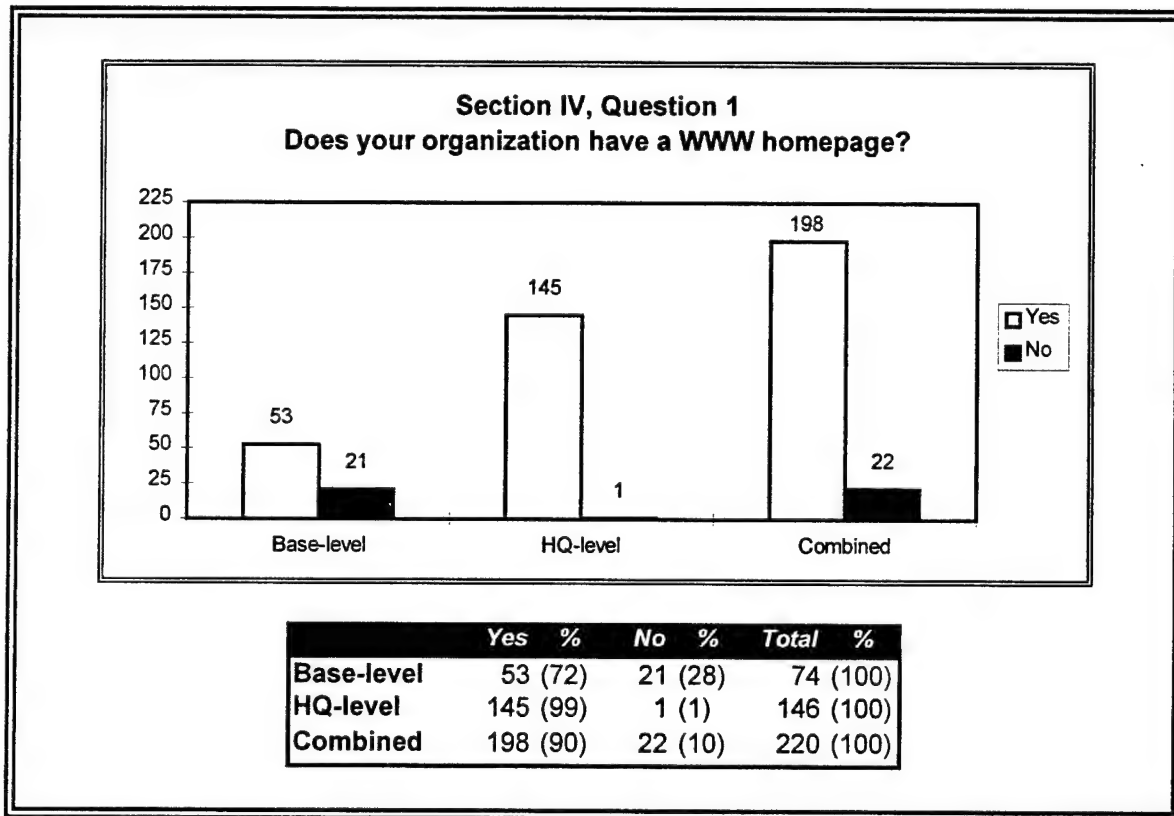


Figure 19: Does your organization have a WWW homepage?

Figure 19 shows that of 220 respondents surveyed, 90 percent are in organizations with World Wide Web homepages. Ninety-nine percent of HQ-

level individuals report having a WWW homepage, while 72 percent of base-level individuals have organizational homepages.

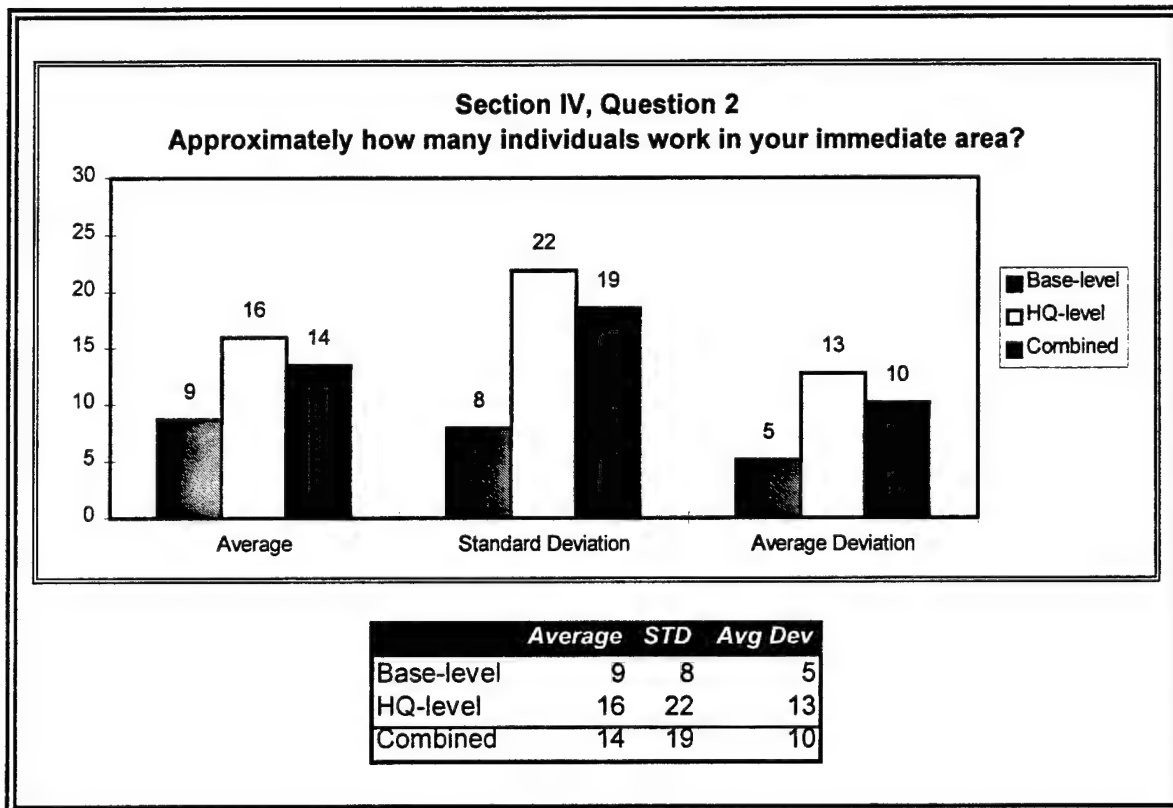


Figure 20. Approximately how many individuals work in what you would consider your "immediate" area?

Figure 20 shows that an average of 16 individuals work in the "immediate" work area of the HQ-level respondents, compared with an average of nine at base-level, with standard deviations of 22 and 8 respectively.

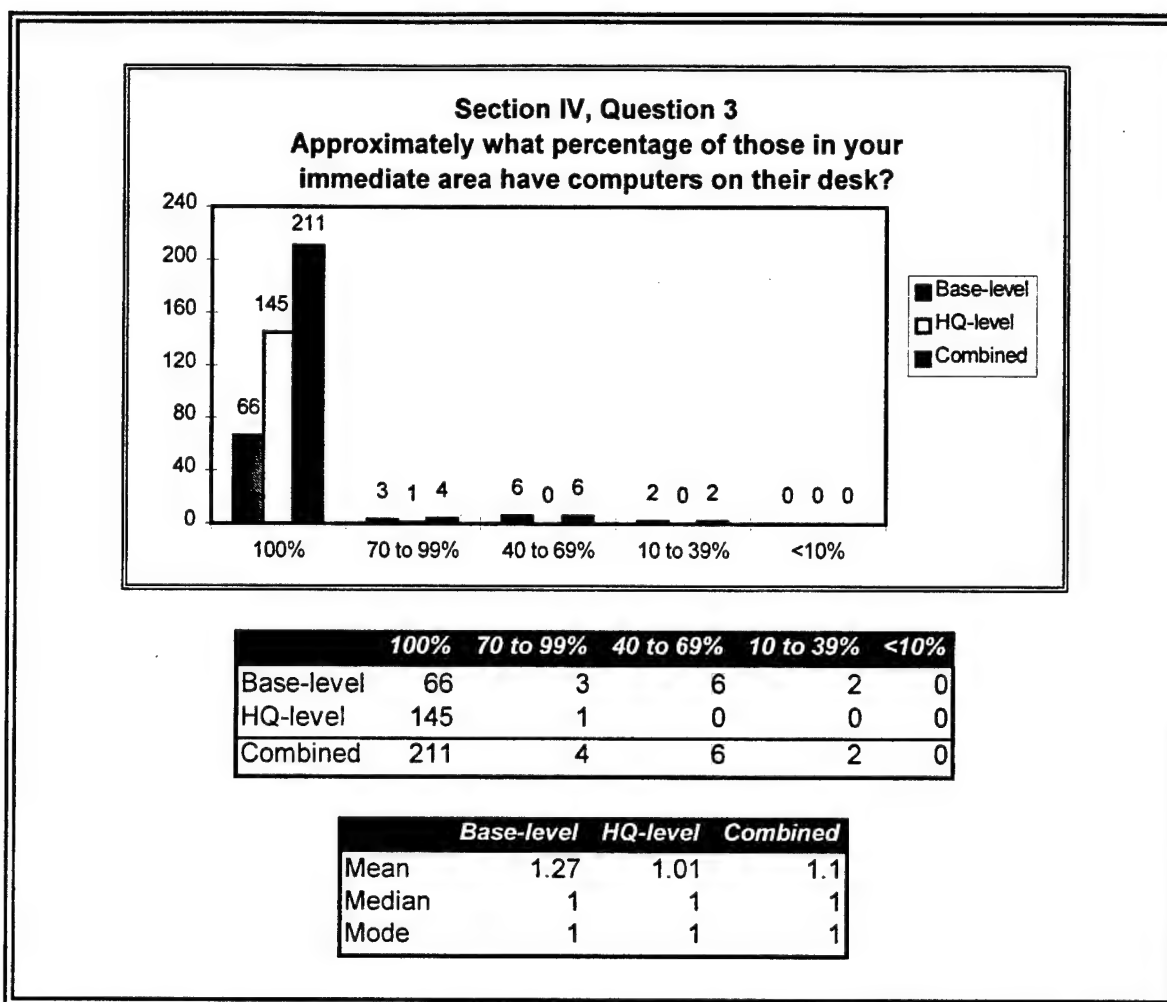


Figure 21: Approximately what percentage of those individuals in your immediate work area have computers on their desks?

Figure 21 shows that of 222 respondents, 211 (95 percent) report that fully 100 percent of their co-workers have computers on their desk. All but one of the persons surveyed who reported less than 100 percent of their co-workers have computers on their desks were from base-level.

The combined mean, median, and mode scores of 1.1, 1, and 1 respectively indicate that nearly all of those individuals surveyed report 100 percent of the individuals in their immediate work area have computers on their desks.

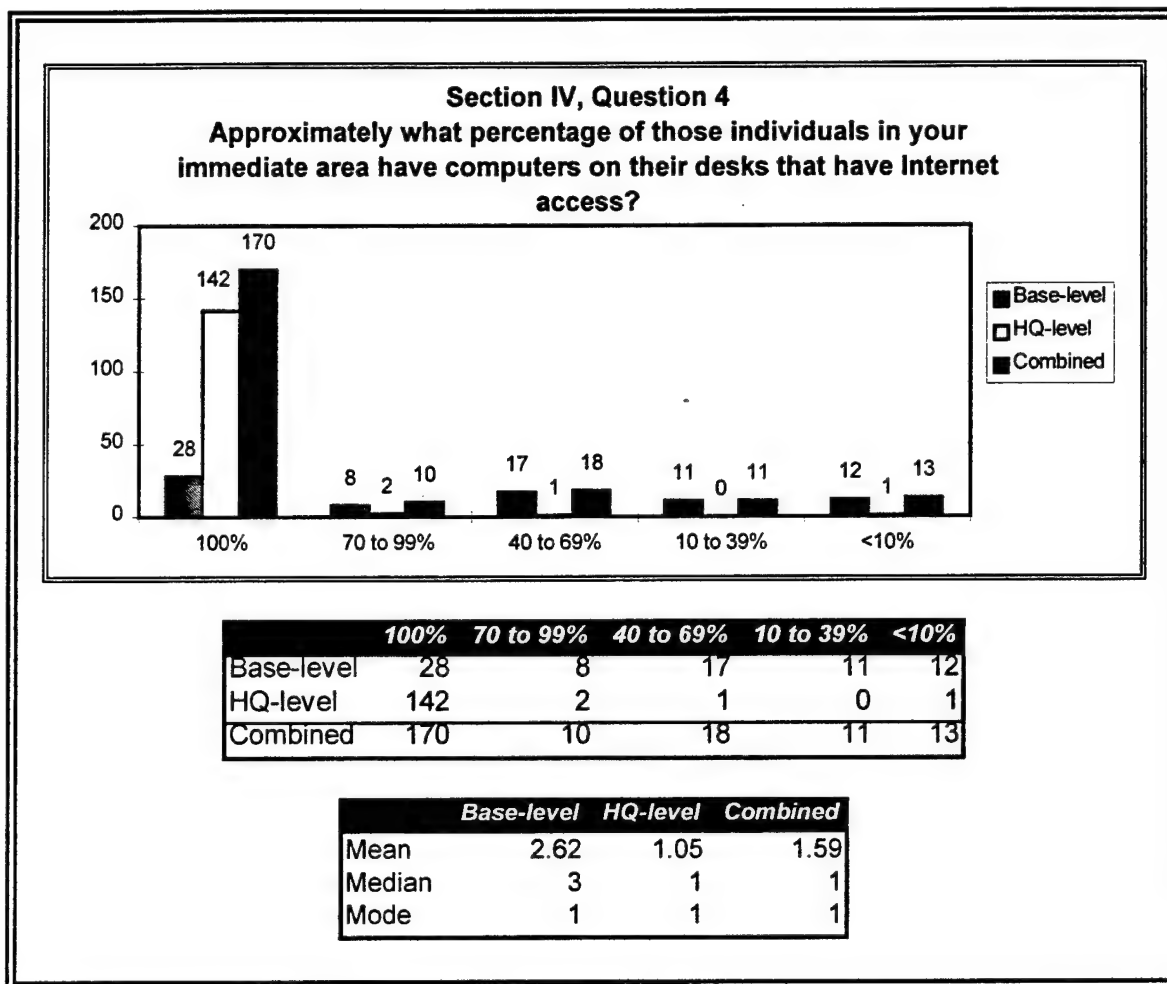


Figure 22: Approximately what percentage of those individuals in your immediate area have computers on their desk that have Internet access?

Figure 22 shows that of 223 individuals surveyed, 170 (77 percent) report that 100 percent of all co-workers in their immediate area have computers on their desk with Internet access. Only three individuals (2 percent) at HQ AFMC report less than 100 percent access to the Internet, compared with 48 (63 percent) of base-level respondents.

The mean, median, and mode scores of 1.05, 1, and 1 respectively indicate that nearly all of those individuals surveyed at HQ AFMC report 100 percent of the individuals in their immediate work area have computers with Internet access at their desk. This contrasts with a mean score of 2.62 and a median of 3 at base-level, indicating a greater number of respondents who report Internet access on between 40 and 69 percent of the computers in their immediate work area.

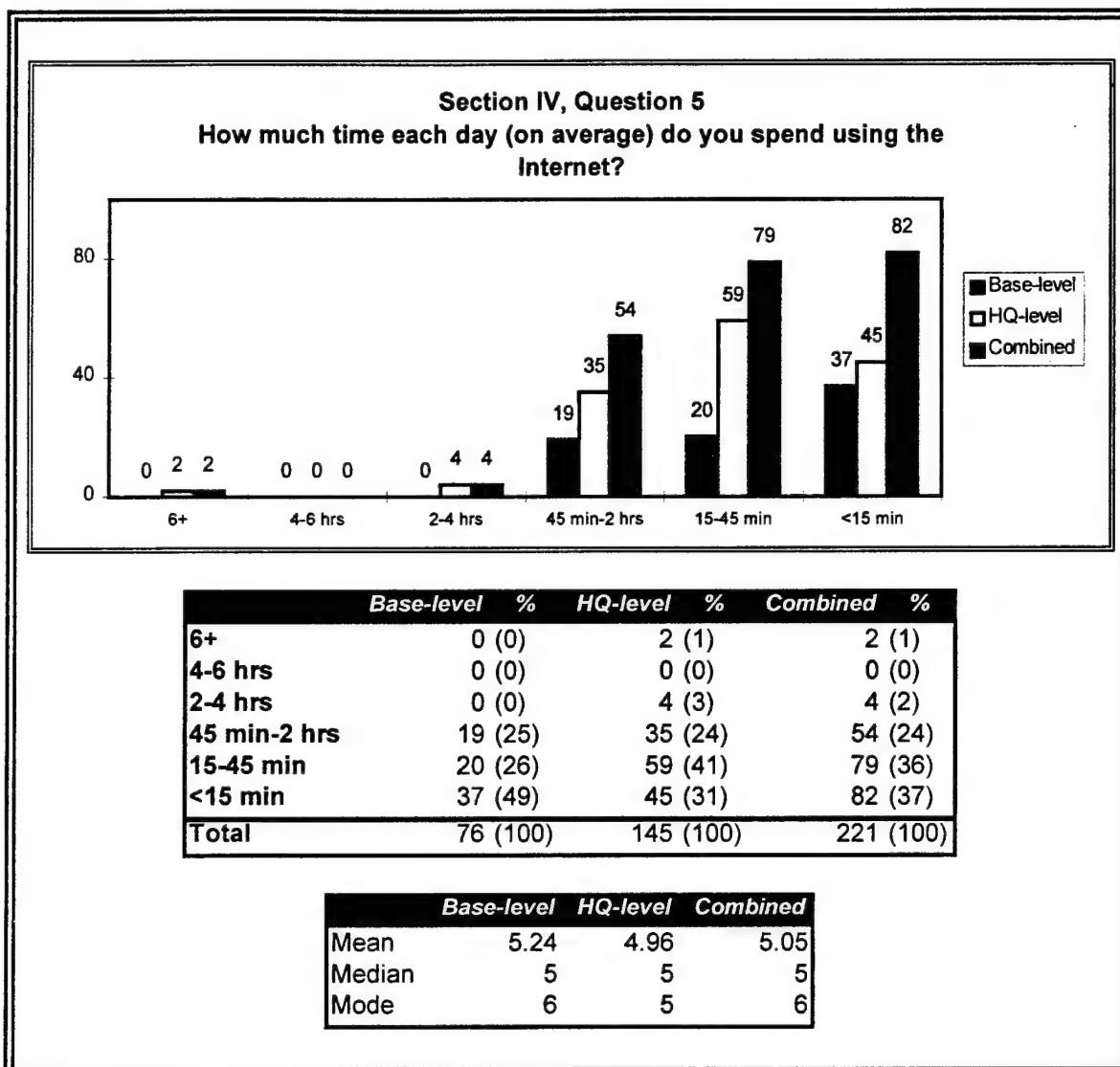


Figure 23: How much time each day (on average) do you spend using the Internet?

Figure 23 shows that none of the persons surveyed at base-level report using the Internet more than 2 hours per day whereas six people at the Headquarters do. The majority of the people at HQ AFMC (65 percent) use the Internet between 15 minutes and two hours a day, compared with 39 (51 percent) of the base-level users. Almost one-half of the base-level respondents

report spending less than 15 minutes a day using the Internet, compared with less than one-third of the HQ-level respondents.

The mean, median, and mode scores shown above indicate most Internet users surveyed spend between 15 and 45 minutes using the Internet daily.

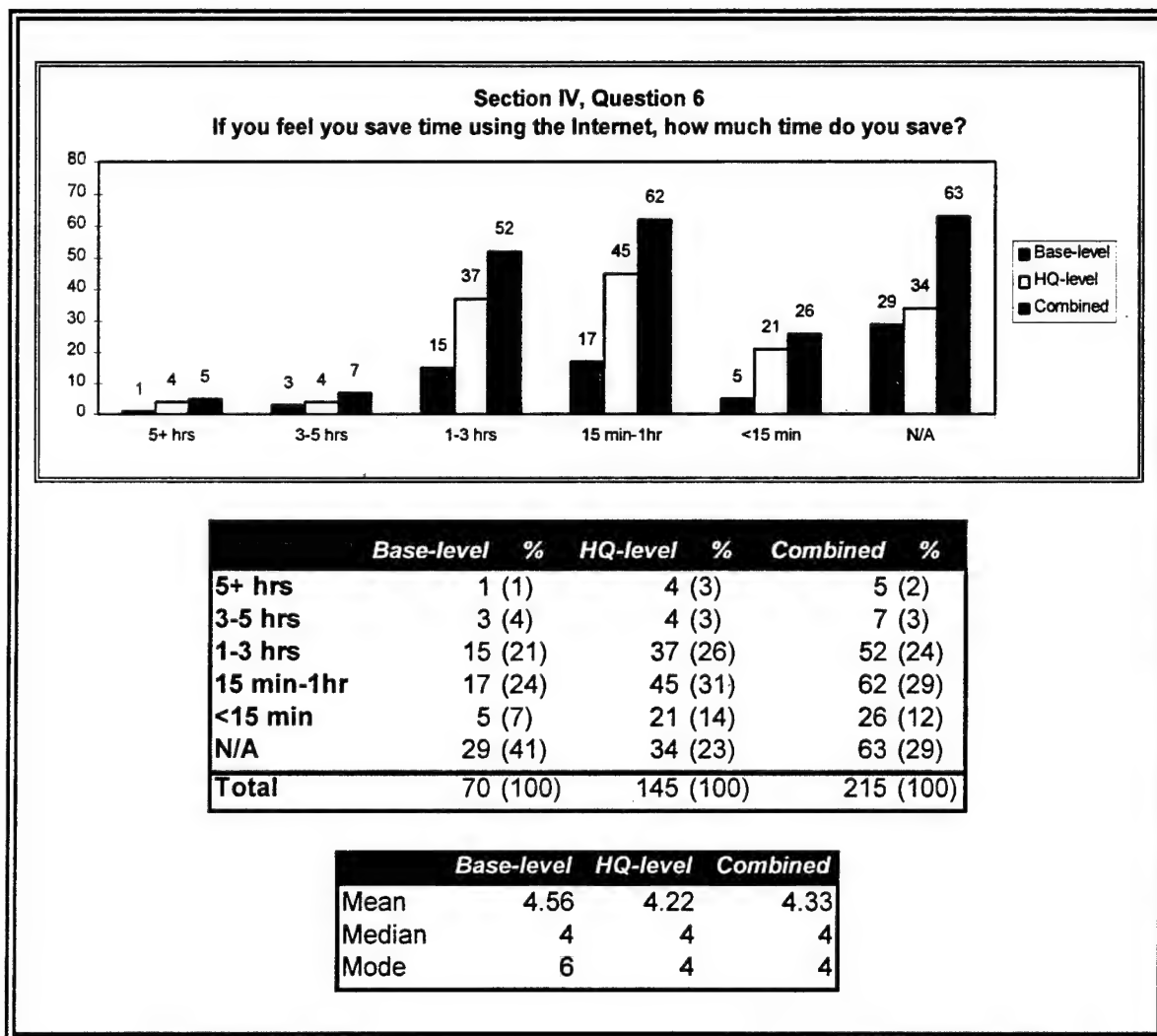


Figure 24: How much time do you save using the Internet?

Figure 24 shows that of 215 survey respondents, only five individuals (two percent) report the Internet saving them in excess of 5 hours per day, while the

majority who use the Internet (29 percent) report it saves between 15 minutes and one hour a day and 24 percent feel the Internet saves between one and three hours per day.

Fifty-seven percent of HQ AFMC respondents believe the Internet saves between 15 minutes and 3 hours, compared with only 45 percent of the base-level personnel surveyed. An overwhelming 41 percent of base-level individuals report they do not believe Internet access saves them any time accomplishing their daily work, compared with 23 percent who feel that way at HQ AFMC.

The mean, median, and mode scores shown above indicate, on average, most Internet users surveyed feel the Internet saves them between 15 minutes and one hour daily.

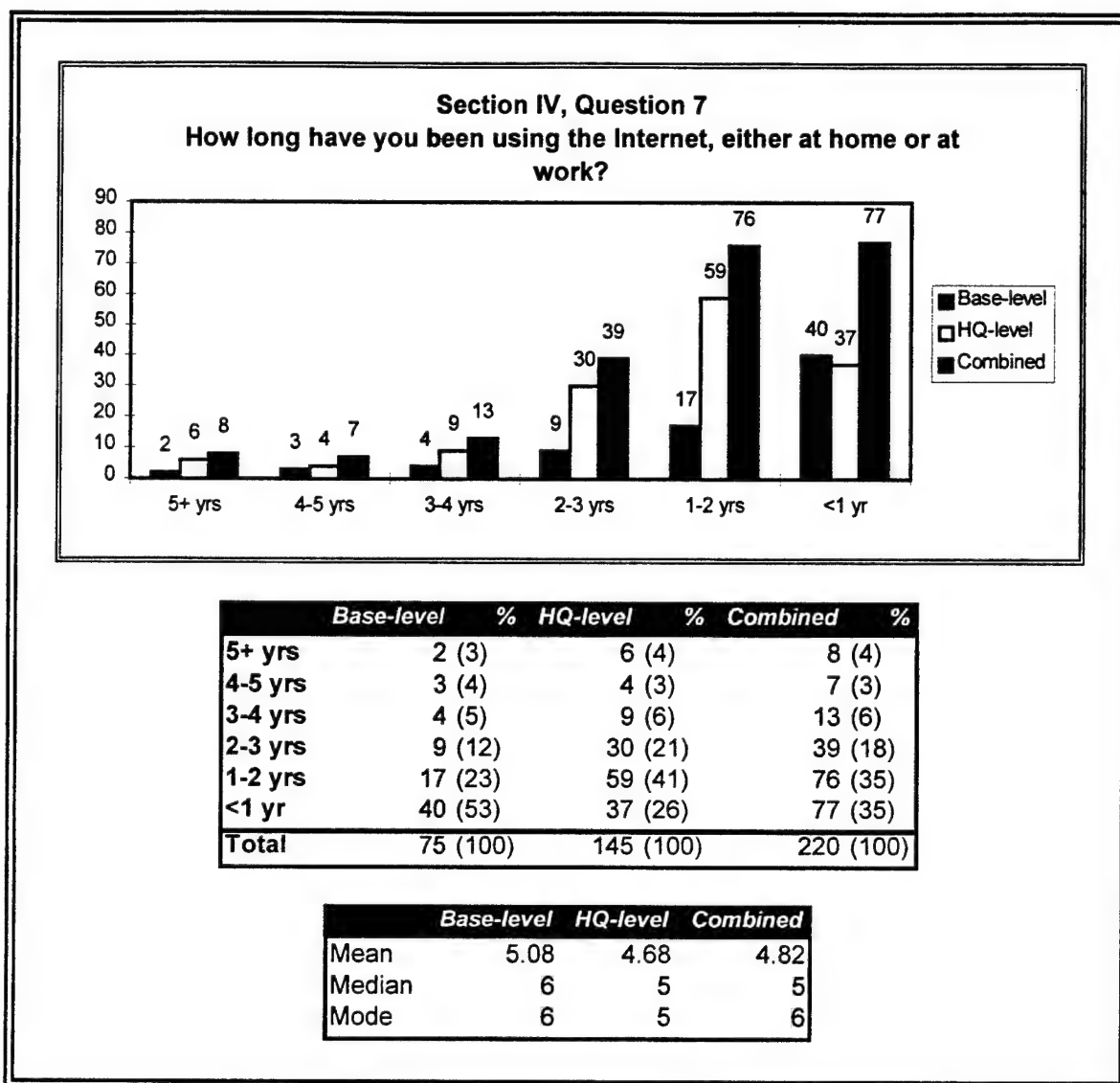


Figure 25: How long have you been using the Internet?

Figure 25 shows that of 220 survey respondents, only 28 individuals (13 percent) have been using the Internet for more than 3 years, while over one-third of those surveyed have been using the Internet for less than one year. Fully 70 percent of the surveyed users have only been accessing the Internet (either at home or at work) for less than 2 years.

The mean, median, and mode scores shown above indicate that most of the individuals surveyed have been using the Internet for less than 2 years.

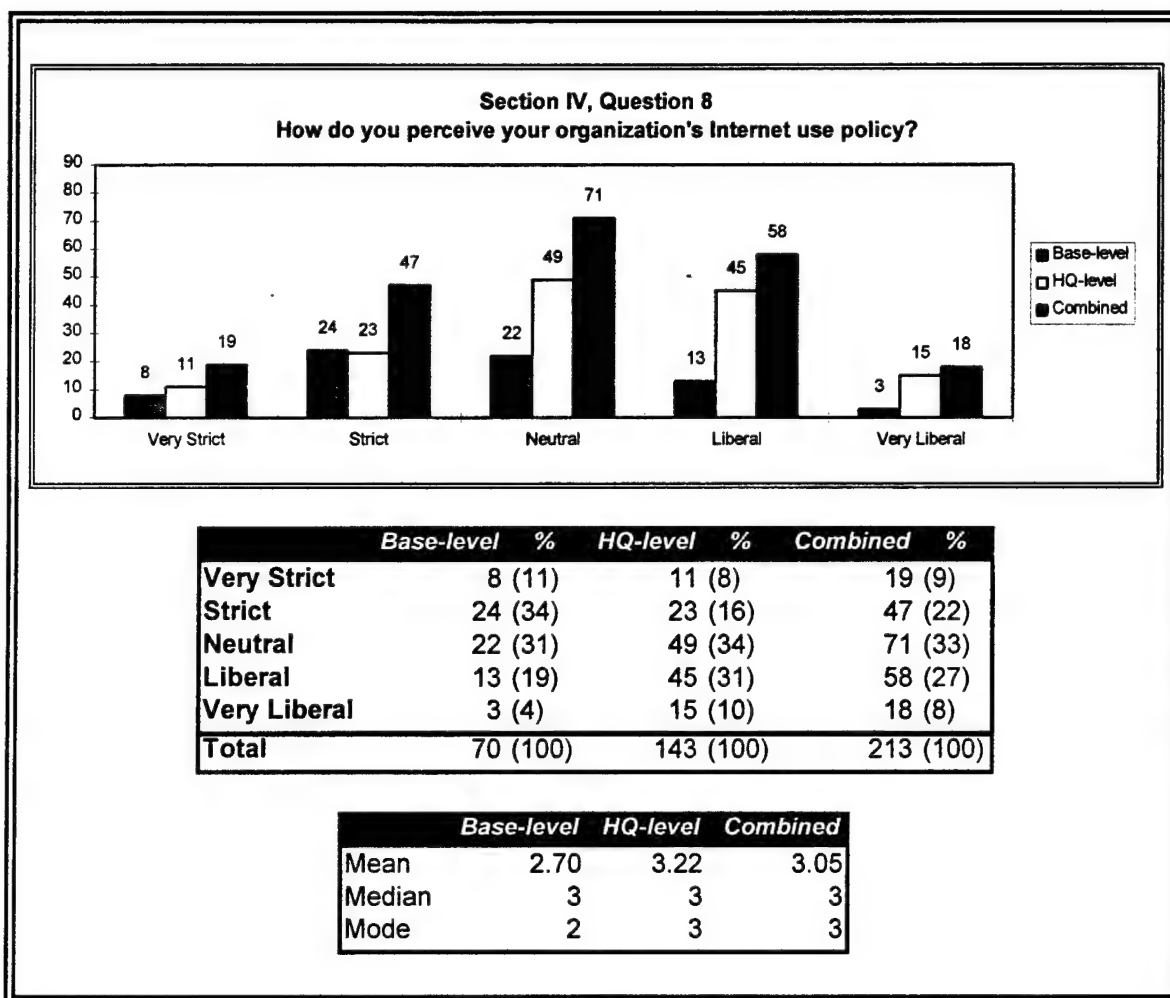


Figure 26: How do you perceive your organization's Internet policy?

Figure 26 shows that of 213 survey respondents, 76 (35 percent) perceive their organization's Internet policy to be either liberal or very liberal. Forty-one percent of the Headquarters respondents feel the policy is liberal to very liberal, compared with only 23 percent of the base-level respondents. By contrast, 45 percent of base-level respondents consider their organization's Internet policy to

be either strict or very strict, compared with 24 percent of the Headquarters-level personnel.

The combined mean, median, and mode scores shown above indicate that, on average, respondents perceive their organization's Internet use policy as neither strict nor liberal. However, the base-level mean of 27 and mode of 2 suggest that the 82nd Training Wing respondents view their organization's interpretation of the Air Force Internet use policy as strict.

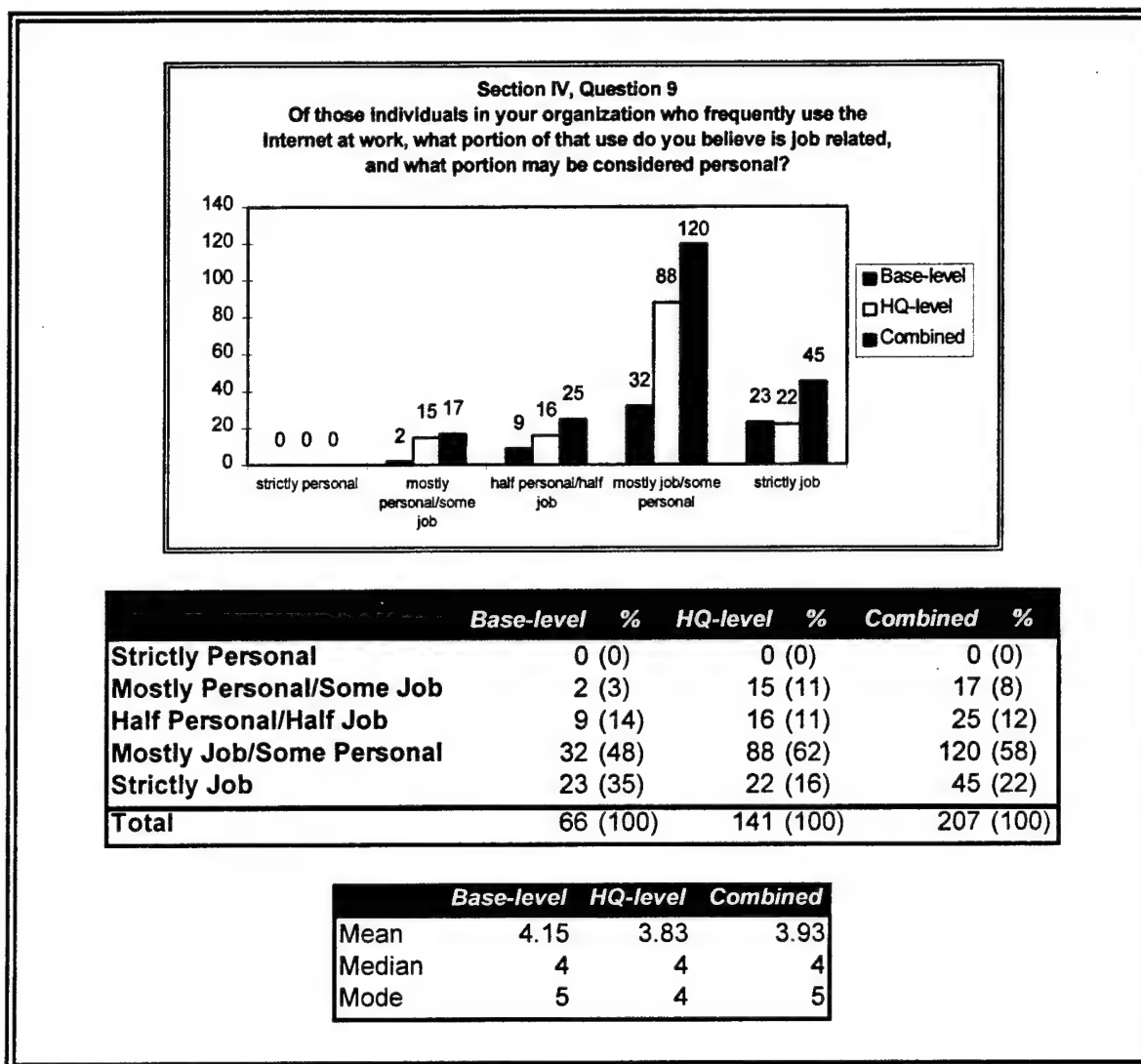


Figure 27: How do you perceive your organization's actual use of the Internet?

Figure 27 shows that of 207 survey respondents, fully 58 percent believe the Internet use in their organization is for mostly job-related purposes, with some occasional personal use, and another 22 percent see Internet use in their organization as strictly job-related. None of those surveyed believe the Internet is used strictly for personal reasons and only 8 percent think the Internet is used mostly for personal reasons, with only occasional job-related use. Over one-third

(35 percent) of base-level persons perceive the Internet to be used for strictly job-related purposes, while only 16 percent of Headquarters-level personnel feel the same.

The mean, median, and mode scores shown above indicate most respondents perceive Internet use in their organization as mostly job related, with some personal use.

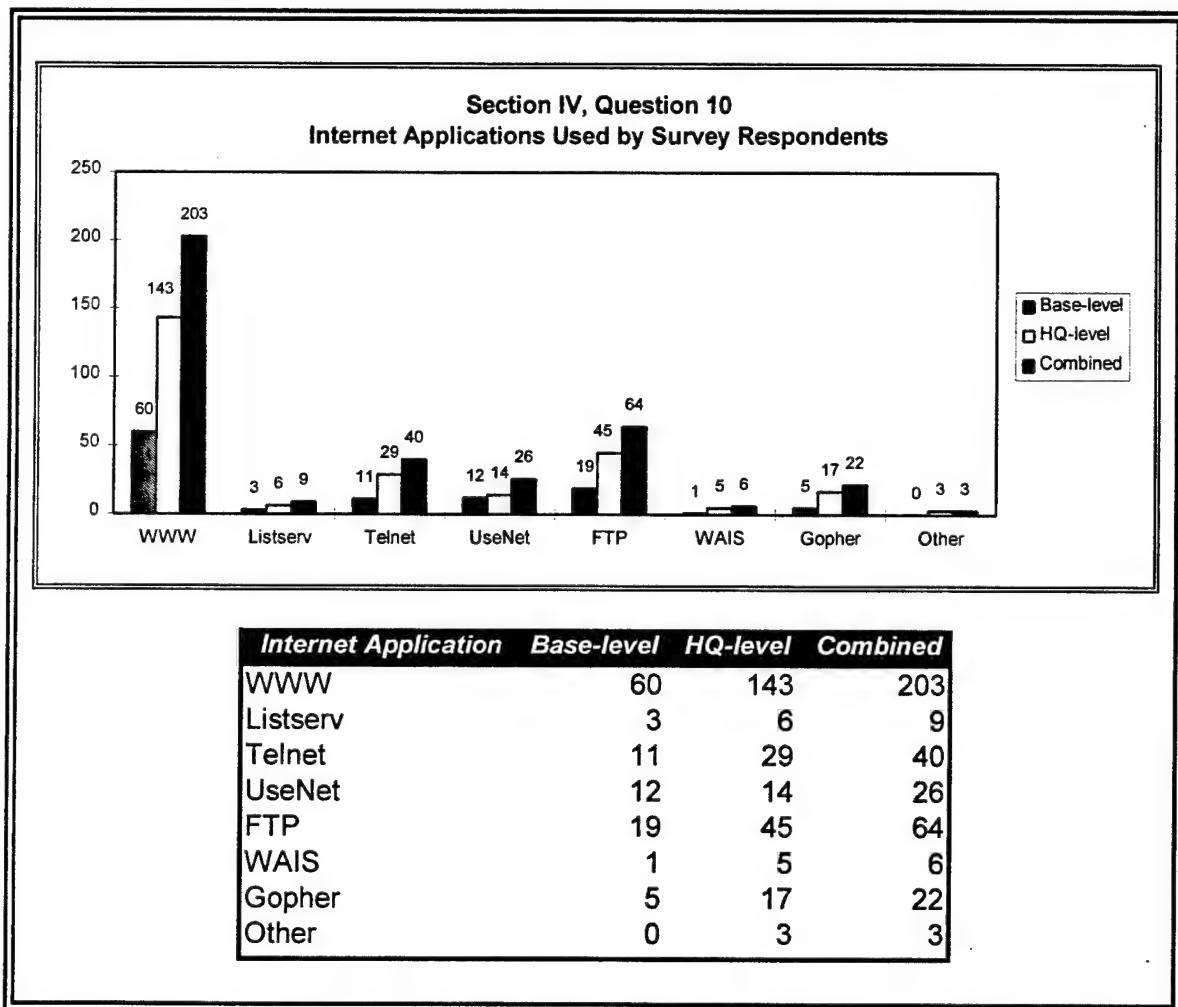


Figure 28: Internet Applications Used by Survey Respondents

Figure 28 shows that, of survey respondents, the World Wide Web is the most used application when accessing the Internet. Sixty-four persons surveyed, (approximately 30 percent) report using FTP, 40 use Telnet in the course of their work and approximately 12 percent use Usenet and/or Gopher.

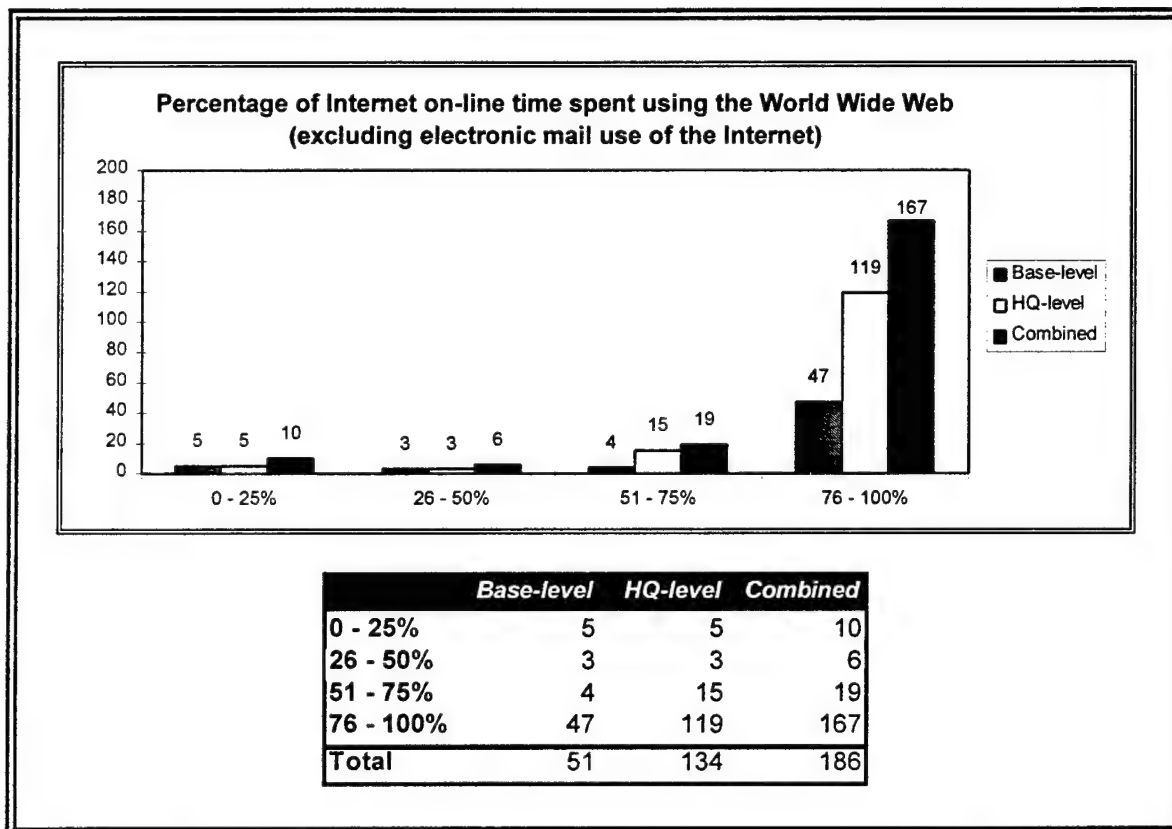


Figure 29: Percentage of on-line time spent using the World Wide Web

Figure 29 shows that 10 survey respondents report using the World Wide Web less than 25 percent of their on-line Internet time, 6 use it between 26 and 50 percent of the time, 19 report using it between 51 and 75 percent of the time, while 167, fully 90 percent of those who use the WWW report using it between 75 and 100 percent of their on-line time.

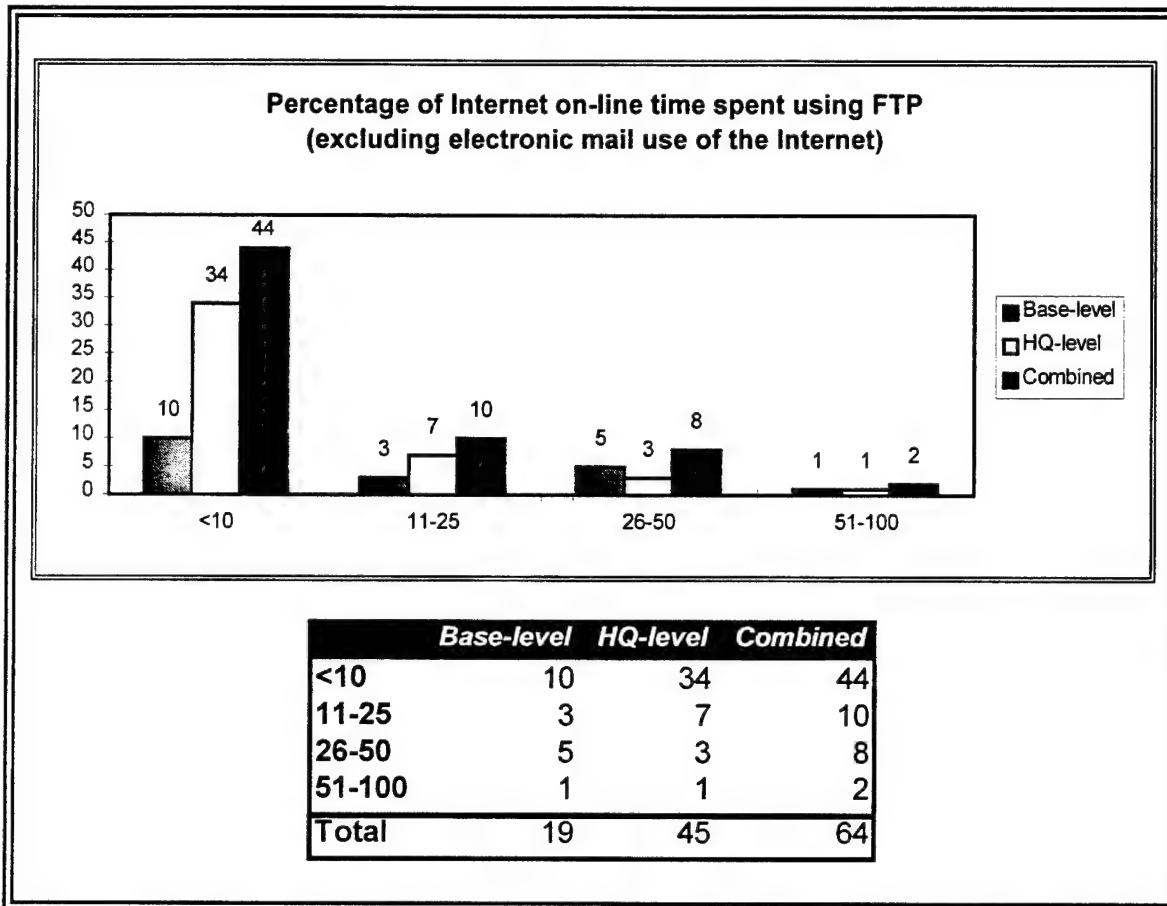


Figure 30: Percentage of on-line time spent using FTP

Figure 30 shows that the 64 survey respondents who report using FTP, 44 of them access it less than 10 percent of their on-line Internet time, and 20 individuals report accessing it more than 10 percent of their time using the Internet.

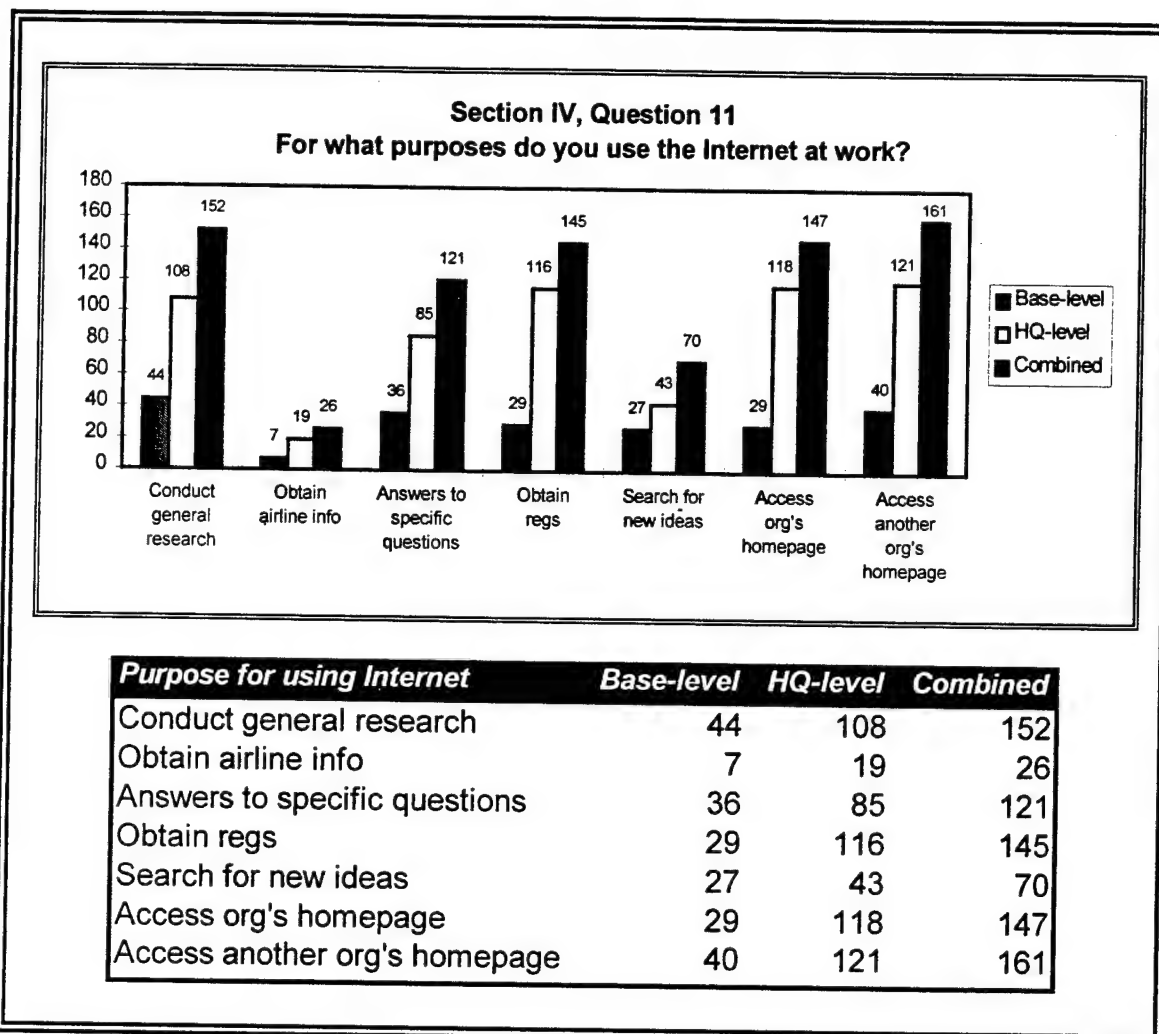


Figure 31: For what purposes do you use the Internet at work?

Figure 31 shows that in roughly equal proportions, Internet users surveyed use the Internet to conduct general research, obtain answers to specific questions, obtain copies of or gain access to regulations, and gain access to either their own organization's or another organization's homepage. The figure also shows that only 26 of those surveyed use the Internet to obtain airline information and 70 individuals search for new ideas on the Internet.

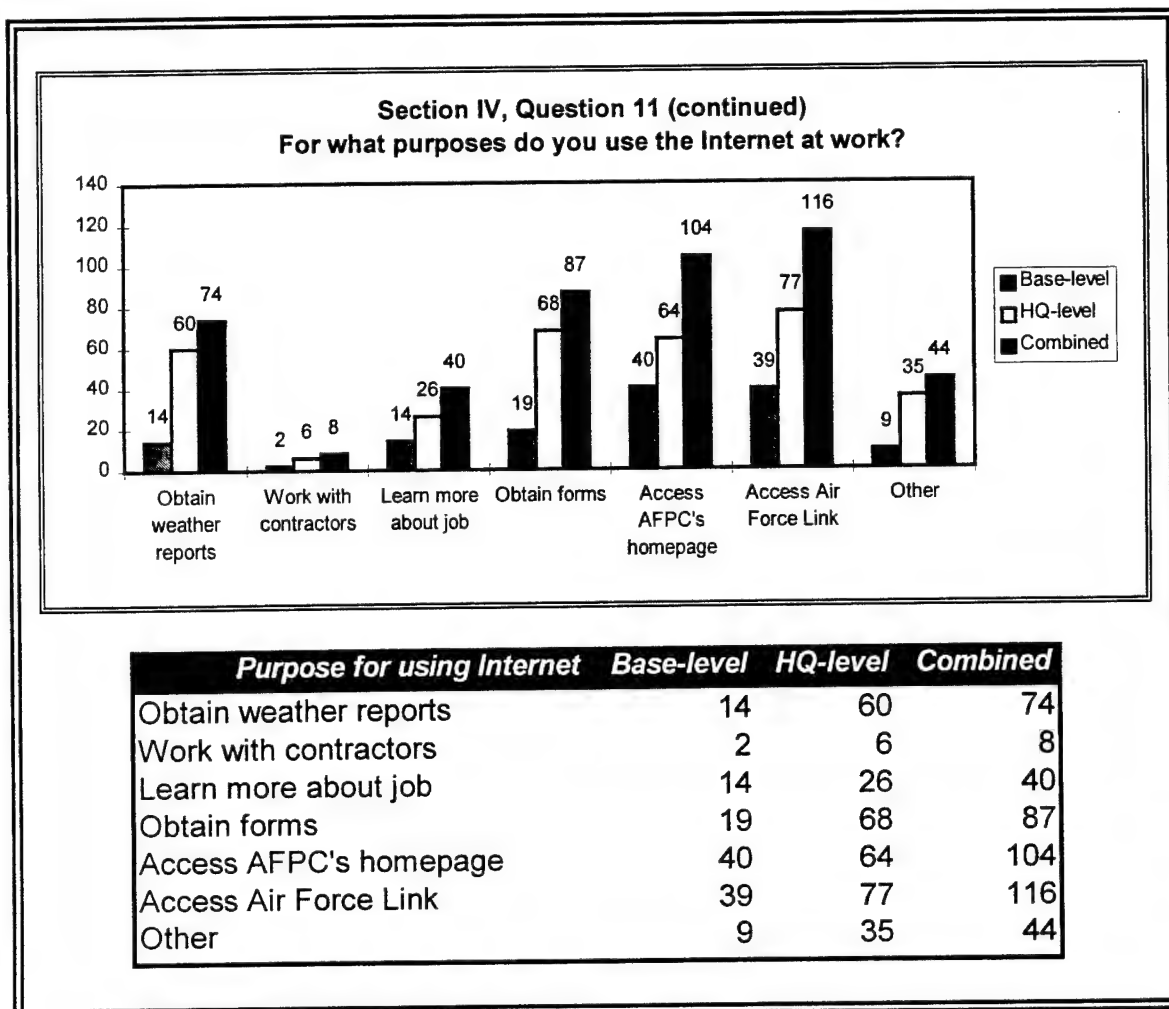


Figure 31 (continued): For what purposes do you use the Internet at work?

Figure 31 (continued) shows that in roughly equal numbers, those surveyed use the Internet to access AFPC's homepage and Air Force Link. Only 8 individuals report using the Internet to work with contractors, while 74 use it to obtain weather reports. Eighty-seven personnel access forms via the Internet and 44 use the Internet for purposes not listed.

Survey instrument--Section IV, Questions 11 through 15. Twenty-five individuals provided additional comments to Question 11, explaining the "other"

purposes for which they use the Internet at work. These comments are shown in Appendix B. Most survey respondents provided comments to the remaining four open-ended questions--those comments are presented in Appendices C, D, E, and F.

Analysis of Variance (ANOVA)

Analysis of Variance (ANOVA) testing was performed on each of the measures⁷ used, as related to the research questions posed in Chapter I, and as proposed in Chapter III. The following hypothesis are presented below, followed by a discussion of the ANOVA results.

Hypothesis 1₀: Infusion levels of Internet technology are equal at all levels within the Air Force.

Hypothesis 1_a: Infusion levels of Internet technology are not equal at all levels within the Air Force.

[illegible]

Likewise, when using the infusion measure "My job is easier because I have access to the Internet" as the dependent variable, and organizational level as the independent variable, infusion levels again varied significantly. ANOVA testing for these variables showed an F-value of 4.70 with $p = 0.0313$.

When each technology infusion measure, as outlined in Chapter IV, was similarly tested, the results were consistent. All infusion measures showed sufficient evidence to reject the null hypothesis, in favor of the alternate.

Hypothesis 2_o: User acceptance of Internet technology is equal at all levels within the Air Force.

Hypothesis 2_a: User acceptance of Internet technology is not equal at all levels within the Air Force.

Hypothesis tests were conducted with an alpha value of .05. The average of the user acceptance measures "I am comfortable using the Internet" and "I enjoy using the Internet to accomplish certain aspects of my job" was tested against organizational level in this experiment. Tests results of $F = 54.26$ and $p = 0.0000000000000754$ and provide sufficient evidence to reject the null hypothesis in favor of the alternate. Therefore, it can be stated with a high level of confidence that user acceptance of Internet technology varies by organizational level within the Air Force.

Hypothesis 3_o: Supervisory support for use of Internet technology does not affect the level of user acceptance within the organization.

Hypothesis 3_a: Supervisory support for use of Internet technology does not affect the level of user acceptance within the organization.

⁷ Some measures proposed in Chapter III were discarded after further analysis determined the items were not highly correlated with the other measures.

Hypothesis tests were conducted with an alpha value of .05. In this experiment, the average of the user acceptance measures described above was used as the dependent variable and level of supervisory support was the independent value. The average of the supervisory support measures "My supervisor routinely uses the Internet to accomplish his/her work," "My supervisor encourages use of the Internet," and "My supervisor expects me to be more productive since I have access to the Internet" was 3. For the purposes of this experiment, a response of 3.5 or higher was considered "High level of supervisory support" and response below 3 was considered "Low level of supervisory support."

Tests results of $F = 47.54$ and $p = 0.00000000000997$ provide sufficient evidence to reject the null hypothesis in favor of the alternate. Therefore, it can be stated with a high level of confidence that user acceptance of Internet technology varies by level of supervisory support for the technology.

Hypothesis 4_o: Access to the Internet at work does not affect productivity levels of Air Force members.

Hypothesis 4_a: Access to the Internet at work does affect productivity levels of Air Force members.

Hypothesis tests were conducted with an alpha value of .05. In this experiment, the average of the productivity measures described in Chapter IV was used as the dependent variable, with access to the Internet at work as the independent variable. Tests results of $F = 13.94$ and $p = 0.00024$ provide sufficient evidence to reject the null hypothesis in favor of the alternate.

Therefore, it can be stated with a high level of confidence that productivity levels of Air Force members vary dependent upon their access to the Internet.

Hypothesis 5_o: A person's experience with a home computer with a private Internet service provider does not affect user acceptance of Internet technology within the Air Force.

Hypothesis 5_a: A person's experience with a home computer with a private Internet service provider does not affect user acceptance of Internet technology within the Air Force.

Hypothesis tests were conducted with an alpha value of .05. In this experiment, the average of the user acceptance measures described above was used as the dependent variable and a person's use of a private Internet service provider was used as the independent variable. Tests results of $F = 10.02$ and $p = 0.001817$ provide sufficient evidence to reject the null hypothesis in favor of the alternate. Therefore, it can be stated with a high level of confidence that experience with an Internet service provider on a person's home computer affects user acceptance of Internet technology.

Hypothesis 6_o: Air Force policy on Internet use is perceived equally at all levels within the Air Force.

Hypothesis 6_a: Air Force policy on Internet use is not perceived equally at all levels within the Air Force.

Hypothesis tests were conducted with an alpha value of .05. In this experiment, a person's perception of their organizations implementation of Air Force Internet use policy (dependent variable) was tested against organizational level (independent variable). Tests results of $F = 11.00$ and $p = 0.001072$ and provide sufficient evidence to reject the null hypothesis in favor of the alternate. Therefore, it can be stated with a high level of confidence that individuals at

different organizational levels within the Air Force perceive their organization's Internet use policy differently.

Personal Interviews. Personal interviews were conducted with five individuals at Wright-Patterson AFB, OH. The interviewees were comprised of one civilian contractor, one civilian, one staff sergeant, one technical sergeant, and one colonel. All of those interviewed used the Internet extensively in their jobs and all but the colonel are responsible for their organization's World Wide Web homepage.

The interviews elicited much of the same information as on the survey instrument, but allowed more opportunity to discuss the opened-ended Internet use, potential future applications, and policy questions.

Several interviewees reported that they felt using the Internet was not so much a "time saver" as an "efficiency enhancer." It allows the user access to more information, directly from the source in real-time. One example cited was that of the Government Accounting Office report. It had been published the day of the interview and the user was able to access it that day and download a copy for immediate use. The method used in the past was to wait for notification through newsletter that the GAO report was available, have his secretary mail out a request for a copy of the report which would arrive in several weeks.

All of those interviewed see the Internet as vastly changing the way they do business. Publications and forms can be accessed from the user's desk, versus traveling across base to the publications library. Assignment information and locator information is immediately accessible rather than leaving the office to

go to the Military Personnel Flight in person. They also see the Internet as a extremely useful research tool, and a means for obtaining software updates.

One potential future application for the Internet foreseen is in the training arena. Electronic courses could be place on a server, and individuals could take the course at any time, rather than sending people TDY to the course. The cost savings could be potentially enormous. One of the limitations felt by those interviewed was that of budget constraints. In order to have effective training courses, the computers accessing the course would have to have multi-media capability, which is not currently widespread.

Only one of those interviewed felt that Internet use should be strictly controlled. The others firmly believed the policy should be as liberal as possible, to allow individuals the opportunity to explore the Internet in order to learn how best to maximize its potential. Most felt the policy should be similar to that of telephone use--it's a government asset, it should be used for official purposes, but occasional personal use is acceptable (such as when individuals use the phone to call their spouse when they're planning to work late). As one person noted, "if it's OK to pick up the phone and order a pizza because you're going to work through lunch, what's the problem with ordering that pizza on-line?"

Chapter Summary

Chapter IV presented the results of the Internet Use in the Workplace Survey, and summarizes some of the common findings in the personal

interviews conducted. This presentation lays the foundation for answering the research questions proposed in Chapter I. Chapter V will address those research questions based upon the data in Chapter IV, and will provide recommendations for Internet policy.

V. CONCLUSIONS AND RECOMMENDATIONS

Overview

This chapter will address each of the research questions advanced for study in Chapter I. Conclusions based upon the data presented in Chapter IV will be offered, as well as recommendations resulting from the study and areas for further research.

Research Questions Answered

Research Question #1. Is the information technology of the Internet being infused equally into all levels of the Air Force?

The analysis of the data presented in Chapter IV shows that, for the sample population included in this study, infusion is definitely not occurring at all levels equally. All infusion measures tested against organizational level showed significant variance between levels. Hypothesis testing proved that Internet technology is more highly infused at the headquarters-level than it is at base-level.

Research Question #2. Does management support of Internet technology and its use on the job affect the level of acceptance on the part of individuals within the unit?

This research demonstrated that supervisory support for Internet use at work does, in fact, affect the level of acceptance on the part of subordinates. Increased supervisory support for the Internet resulted in

increased acceptance levels on the part of subordinates. Likewise, a lack of supervisory support for Internet use resulted in lower acceptance levels by subordinates.

Research Question #3. Does access to the Internet affect Air Force members' productivity on the job?

The data collected in this study supports the idea that access to the Internet positively affects productivity on the job. The data clearly shows that those individuals with access to the Internet feel they are more productive than they were before they had access.

Research Question #4. Does a person's experience with a private Internet service provider affect the level of user acceptance?

Experience with a private Internet service provider was shown to positively affect the level of user acceptance for Internet technology. Hypothesis testing showed that individuals with an Internet service provider were have higher levels of user acceptance to Internet technology than those without access to the Internet at home.

Research Question #5. For what purposes are Air Force members using the Internet?

Figures 32 and 33 in Chapter IV show that the majority of those surveyed use the Internet for the following reasons: conduct general research, obtain answers to specific questions, obtain or access regulations, and access their own organization or another organization's homepage. Almost half of those surveyed also use the Internet to access Air Force Personnel Center's

homepage and Air Force Link. Other common uses for the Internet are to obtain forms, weather reports, and travel information, as well as conducting market research, gaining access to Congressional reports, and researching legal databases. Appendix B goes into detail concerning specific uses Air Force members have for the Internet, while Appendix C details exactly **how** Air Force members are using the Internet to accomplish their jobs.

Research Question #6. How do Air Force members perceive the Air Force policy on Internet use, as implemented within their organization?

Of all individuals surveyed, less than one-third consider their organization's Internet use policy to be strict or very strict. However, almost half of the base-level personnel feel the policy is strict, compared to only 23 percent of the all headquarters personnel. Almost equal percentages of persons surveyed (31 and 34 percent respectively) were neutral (see Figure 27, Chapter IV), while 23 percent of base-level compared to 41 percent of headquarters personnel consider the Internet policy to be liberal or very liberal.

Additionally, ANOVA testing resulted in a significant variance between the two populations. This data illustrates a dramatic difference in perception of Internet use policy between differing organizational levels. Further research into whether organizational perceptions of the base-level individuals surveyed at the 82nd Training Wing reflect the views of those at HQ AETC would provide insight into these differences. Similarly, a study of perceptions on Internet use policy at HQ AFMC subordinate units may also provide valuable information regarding the organizational level differences suggested by this research.

As a side note, only 8 percent of all users surveyed believe the Internet is being used for purposes which are primarily personal, and not a single person believed anyone in their organization used the Internet for strictly personal reasons (see Figure 27, Chapter IV).

Research Question #7. What recommendations can be made regarding Air Force Internet use policy, and the implementation of that policy?

Appendix G gives a detailed accounting of all responses to the question "What do you think the Air Force's policy *should be* regarding Internet use. Fifty-three persons chose not to respond to the question. Twenty-six people responded with "For Official Use Only" or variations on that theme. Twenty individuals felt the policy is "Okay as it currently stands" but interestingly enough, they had differing opinions on what that policy *is*. Only eight individuals felt strongly that Internet use should be strictly controlled and/or monitored for inappropriate use--one went so far as to say "block use unless absolutely necessary" (Appendix G, #134). At the opposite extreme, fourteen individuals believe there should be unlimited access for all personnel (except for pornographic material). A common suggestion regarding the policy was that it should be similar to the telephone policy (For Official Use Only generally speaking, but with occasional personal use allowed--provided it did not interfere with job performance).

Limitations of the Study

There are a number of limitations involved with the data collection methods used in this study. One involves the use of self-reports. Section IV of the survey instrument asks participants to estimate number of hours spent using the Internet, as well as number of hours saved, if any, by using the Internet. Both of these questions are self-reports of time spent using technology, which research has shown to often be not very reliable (Taylor and Todd, 1995)

In order to provide for greater generalizability of the results of this research, the determination was made to contact individuals at various organization levels, including MAJCOM and base-level, with varying exposure to Internet use. However, causal relationships are not clear in this study. This research does not control for differing MAJCOMs, as the sample population was based upon convenience. The MAJCOM organization studied was Air Force Materiel Command (AFMC) and the base-level organization was Air Education Training Command.

As MAJCOM level was not controlled, it is unclear how one variable (organizational level) affects or is responsible for changes in another variable (such as user acceptance, or infusion) (Cooper and Emory, 1995). Conclusions drawn from this sample population must take into account that differences, if they exist, may be due to organizational level (MAJCOM or base) or due to the MAJCOM itself. As such, some may view this as a significant limitation. Subsequent research to control for MAJCOM is recommended.

There may also be some bias associated with the wording of Question 6, Section IV (Appendix A). The question refers to time *saved* using the Internet. The researcher attempted to limit the bias associated with the word "saved" by adding a qualifier ("IF you feel you **save** time using the Internet...") to the question, and by adding an answer choice of "Not Applicable--I don't think the Internet saves me time." Despite the problematic nature of this question, the researcher felt potentially important information could be elicited from respondents, and the determination was made to include the question in the survey instrument.

Another limitation of the study involves the qualitative nature of the instrument. Many of the survey instrument questions were designed to elicit opinions, ideas, and potential applications for Internet use. While it is expected that the responses to these questions will provide important information for Air Force policy makers, the very nature of the responses will make them difficult to quantify.

Despite the best efforts of the researcher, potential problems exist regarding the distribution of the survey instrument. Since the instrument was sent via electronic mail at HQ AFMC, only those individuals with easy access to electronic mail would be likely to receive the survey and have the opportunity to respond. Initially, it was thought that only those familiar enough with computers to extract a Microsoft Word™ or ASCII formatted document from an electronic message and then properly save and return the completed survey would be

likely to participate. This may not have been a great limitation as many respondents simply chose to print out a paper copy of the survey and return a hand-written response via the mail system or facsimile.

Lastly, it is not certain whether the survey was fully distributed to all directorates with the headquarters. The survey was supplied to each directorate's executive officer, along with a request for electronic dissemination of the survey. It is unknown how many surveys were actually transmitted and to whom.

Recommendations

The conclusions reached above, in answer to the research questions originally posed in Chapter I, along with other data collected during the course of this study, suggest a number of recommendations pertaining to Internet use in the Air Force. These recommendations are outlined below.

Fully diffuse Internet technology at base-level. Personnel must be able to access the Internet at their own computer before being able to recognize the benefits it can provide them. Until users accept that accessing the Internet in the course of their daily work can help them in their daily work, the technology will not be fully imbedded and therefore not infused into the organization.

Train people on how to use the Internet and what it can do for them.

Simply putting Internet access on an existing computer is not sufficient. Fifty-nine percent of the individuals surveyed report insufficient training on the Internet and sixty-one percent believe that more training on Internet use would make

them more productive in their work. As indicated repeatedly in the comments shown in Appendices E and G, adequate training is a very important issue. Allowing users to explore the Internet may be helpful in their gaining familiarity with the technology, but if they don't know *how* to explore or are fearful they might come across a site that someone deems "unofficial," people may choose to avoid it entirely.

Common sense use policy. As suggested numerous times in the comments listed in Appendix G, Air Force policy on Internet use on the job should not be overly restrictive. A common sense approach to the technology is recommended. The Internet should be made available to users; they should have adequate training to ensure they (and the organization) receive optimum benefits from its use, and they should not be so afraid about "the Internet police" lurking over their shoulders that they cannot use the technology.

Naturally, access to pornographic sites is a major concern to a large number of those surveyed, as reported in Appendix G. Access to inappropriate sites or abuse on an individual level (such as not accomplishing required work due to excessive "surfing" or "playing" on the Internet) should be dealt with at the supervisory level. Just as supervisors are responsible to ensure their subordinates don't spend excessive amounts of time playing *Solitaire*, reading the newspaper, loafing, taking smoke breaks, or talking on the phone to their friends, they should be responsible for their subordinate's reasonable use of the Internet.

Advertise use policy. Internet use should be encouraged to the greatest extent possible to improved organizational effectiveness. The Air Force Internet use policy has been widely advertised and it should continue to be advertised as many are not aware it exists. The policy should be implemented such that it is not subject to personal interpretations by some supervisors who feel “any time spent on the Internet is considered playing.” (Appendix D, #178)

Areas for Further Research

A tremendous amount of data was collected during the course of this research; additional in-depth analysis of the current data could be performed, including factor analysis and Crombach's alpha to determine strength of measures used. Subsequent research could also be conducted in a number of areas based on the results of this study.

User acceptance and supervisory support measures. A tremendous amount of current literature deals with the topics of user acceptance and supervisory support. The measures used in this study could be further refined and expanded for future studies.

Compare MAJCOM responses to those of subordinate units. As this research did not control for MAJCOM level, follow-on research could include responses from a base-level organization in Air Force Material Command. Likewise, responses from Headquarters Air Education and Training Command individuals could be collected and then compared with those from the 82nd Training Wing at Sheppard AFB TX.

Compare responses between different MAJCOMs and different base-level organizations. Depending upon the amount of time and resources available to the researcher, it may be valuable to compare responses from several MAJCOM organizations, as well as several base-level organizations. A broader comparison across organizational levels will allow for greater generalizability of results as they relate to the entire Air Force.

Computer experience and typing skills. A person's experience with using computers could be measured against level of user acceptance of Internet technology. Similarly, familiarity with using the keyboard may affect user acceptance. These measures could easily be incorporated into future research.

Summary

The research undertaken in this study examined the use patterns, acceptance levels, and policy perceptions of Internet users at two organizational levels within the Air Force. The research showed that Internet use is widely accepted and largely routinized within Headquarters Air Force Material Command. Infusion of the technology, however, is not occurring equally at the organizations surveyed.

Many Internet users (or prospective Internet users) at the 82nd Training Wing are wary of the technology, and unclear on the boundaries regarding its use. Also, Internet access is not widely available at base-level, or the computers being used are out-dated, making Internet access impractical.

The technology of the Internet is quickly spreading, throughout the world, as well as the Air Force. Adequate steps must be taken to ensure the technology is infused into organizations smartly. Ease of access, supervisory support, adequate training, and non-oppressive use policies are all essential if the Air Force is to receive the full benefits from this expanding technology.

Appendix A. INTERNET USE IN THE WORKPLACE SURVEY

SECTION I

Name (optional): _____ Duty Title (optional): _____

E-Mail Address (optional): _____ Duty Phone (optional): _____

Organization: _____ Rank/Pay grade: _____

Years in **current** job: _____ Years in federal service: _____

SECTION II

For the following questions, please check the appropriate box, where indicated. When asked to make comments or give examples, please use as much space and/or additional paper as you would like.

1. Do you routinely use a computer in the course of your daily work? ☐ Yes ☐ No

2. Do you have a computer on your desk at work? ☐ Yes ☐ No

If **NO**, do you have easy access to a computer when you need to use one? ☐ Yes ☐ No

3. Do you use a computer at home? ☐ Yes ☐ No

If **YES**, do you use a private Internet service provider (i.e. AOL, ERInet, etc.)? ☐ Yes ☐ No

4. Does the computer you use at work have Internet access? ☐ Yes ☐ No

If YES, please skip to Section III.

5. Should the need arise, are you able to use a computer within your workcenter that has Internet access? ☐ Yes ☐ No

6. Do you feel that Internet access at your desk would be beneficial in accomplishing your work? ☐ Yes ☐ No

If **YES**, please use the space below to list some examples of how the Internet could be used.

IF YOU DO NOT HAVE INTERNET ACCESS IN YOUR WORKPLACE, YOUR SURVEY IS COMPLETE AND YOU MAY RETURN IT NOW. IF YOU *DO* HAVE INTERNET ACCESS, PLEASE CONTINUE WITH THE SURVEY.

SECTION III

For the following section, using a scale of 1 to 5, please circle a number that most accurately reflects your feelings regarding the statement. (If responding electronically, please type the number you have chosen below the question number).

Please do NOT include the use of electronic mail when responding to these statements.

1. I am comfortable using the Internet.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

2. My supervisor routinely uses the Internet to accomplish his/her work.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

3. I use the Internet, but only because I have to in order to accomplish certain aspects of my job.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

4. I often discover new ways to use the Internet to make my job easier.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

5. I have had adequate training in using the Internet to accomplish my work.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

6. I access the Internet daily to do my job.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

7. My effectiveness in my job has been positively impacted by having access to the Internet.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

8. I enjoy using the Internet to accomplish certain aspects of my job.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

9. My supervisor encourages use of the Internet.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

10. My effectiveness in my job has been negatively impacted by having access to the Internet.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

11. I could not do my job without access to the Internet.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

12. My supervisor expects me to be more productive since I have access to the Internet.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

13. If I had more training, I could use the Internet more effectively to accomplish my work.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

14. My job is easier because I have access to the Internet.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

15. My supervisor rarely uses the Internet.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

16. Access to the Internet has made me more productive.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

SECTION IV

For the following questions, please check the appropriate box, where indicated. When asked to make comments or give examples, please use as much space and/or additional paper as you would like. (If responding electronically, please **BOLD** the answer you choose.)

1. Does your organization have a World Wide Web (WWW) homepage? ☐ Yes ☐ No

2. Approximately how many individuals (besides yourself) work in your section (in what you would consider your "immediate" area)? _____

3. Approximately what percentage of those individuals in your immediate area have computers on their desks?

- | | | |
|---|---|--|
| <input type="checkbox"/> 100% | <input type="checkbox"/> between 40 and 69% | <input type="checkbox"/> less than 10% |
| <input type="checkbox"/> between 70 and 99% | <input type="checkbox"/> between 10 and 39% | |

4. Approximately what percentage of those individuals in your immediate area have computers on their desks *that have Internet access*?

- | | | |
|---|---|--|
| <input type="checkbox"/> 100% | <input type="checkbox"/> between 40 and 69% | <input type="checkbox"/> less than 10% |
| <input type="checkbox"/> between 70 and 99% | <input type="checkbox"/> between 10 and 39% | |

5. How much time **each day** (on average) do you spend *using* the Internet? **Please do NOT include time spent reading, reviewing, or composing electronic mail.**

- | | |
|--|---|
| <input type="checkbox"/> 6 hours or more | <input type="checkbox"/> between 45 minutes and 2 hours |
| <input type="checkbox"/> between 4 and 6 hours | <input type="checkbox"/> between 15 and 45 minutes |
| <input type="checkbox"/> between 2 and 4 hours | <input type="checkbox"/> less than 15 minutes |

6. **IF** you feel you *save* time using the Internet vs. alternative methods of accomplishing your work, how much time **each day** (on average) do you save? **Please do NOT include use of electronic mail in your estimate.**

- | | |
|--|---|
| <input type="checkbox"/> 5 hours or more | <input type="checkbox"/> between 15 minutes and 1 hour |
| <input type="checkbox"/> between 3 and 5 hours | <input type="checkbox"/> less than 15 minutes |
| <input type="checkbox"/> between 1 and 3 hours | <input type="checkbox"/> N/A--I don't think the Internet saves me time. |

7. How long have you been using the Internet, either at home or at work?

- | | |
|--|--|
| <input type="checkbox"/> 5 years or more | <input type="checkbox"/> between 2 and 3 years |
| <input type="checkbox"/> between 4 and 5 years | <input type="checkbox"/> between 1 and 2 years |
| <input type="checkbox"/> between 3 and 4 years | <input type="checkbox"/> less than 1 year. |

8. On a scale of 1 to 5, how do you perceive your organization's Internet use policy?

1	2	3	4	5
very strict	strict	neutral	liberal	very liberal

9. Of those individuals in your organization who frequently use the Internet at work, what portion of that Internet use do you believe is actually job related and what portion may be considered personal?

1	2	3	4	5
strictly personal	mostly personal/ some job related	half personal/ half job related	mostly job related/ some personal	strictly job related

10. Please check all Internet applications you currently use, and then indicate the percentage of usage (e.g. if you **ONLY** use the World Wide Web, check WWW and write 100% beside it).

<input type="checkbox"/> WWW	_____ %	<input type="checkbox"/> FTP	_____ %
<input type="checkbox"/> Listservs	_____ %	<input type="checkbox"/> WAIS	_____ %
<input type="checkbox"/> Telnet	_____ %	<input type="checkbox"/> Gopher	_____ %
<input type="checkbox"/> Usenet News	_____ %	<input type="checkbox"/> other _____	_____ %

11. For what purpose(s) do you use the Internet at work? (check ALL that apply)

<input type="checkbox"/> conduct general research	<input type="checkbox"/> obtain weather reports
<input type="checkbox"/> obtain airline information	<input type="checkbox"/> work with contractors
<input type="checkbox"/> obtain answers to specific questions	<input type="checkbox"/> learn more about my job
<input type="checkbox"/> obtain/access regulations	<input type="checkbox"/> obtain forms
<input type="checkbox"/> search for new ideas	<input type="checkbox"/> access AFPC's homepage
<input type="checkbox"/> access my organization's homepage	<input type="checkbox"/> access Air Force Link
<input type="checkbox"/> access another organization's homepage	<input type="checkbox"/> other (please explain)

12. Please describe **how** you use the Internet (**excluding electronic mail**) to accomplish your work. Please provide as much detail as you wish, using additional space as required.

13. As use of the Internet becomes more prevalent, do you foresee potential uses in accomplishing your work that are not currently available? ☐ Yes ☐ No. Please explain.

14. If you came to work tomorrow and discovered you no longer had access to the Internet, how would you conduct the work you had previously done on the Internet?

15. What do you think the Air Force's policy *should be* regarding Internet use?

Thank you for taking the time to participate in this important research. Your responses will be held strictly confidential. Please return the completed survey by e-mail, fax, or distribution to the following address:

Capt Pamela Quintero
AFIT/LAA
2950 "P" St.
Wright Patterson AFB OH 45433

E-mail: pquinter@afit.af.mil
Fax: 937-476-7988 (commercial)
986-7988 (DSN)
Phone: 937-255-7777 x2260 (voice)
785-7777 x 2260 (DSN)
(937) 436-1921 (home)

Appendix B. Survey Responses: Section IV, Question 6

Do you feel that Internet access at your desk would be beneficial in accomplishing your work? Please explain.

(Note: Respondent's code letter is listed after each response. Similar/identical responses have been grouped.)

1. It's a valuable tool for getting the most current information on everything, especially recent financial management matters. DF
2. To glean information from other areas to crossfeed with our office and then pass onto our base populace. EE
3. Easier access to publications. EF
4. Access information sources on acquisition reform topics. Looking up regulations for uniform wear. Checking the forecast. Accessing industry data sources on specific technology questions. Obtain maps to support TDYs... EI
5. Biggest problem, working a fast paced environment--no time to access and play--need training! FB
6. Haven't really used the Internet. FS
7. Access military web sites for good admin information. GG
8. As the exportable training manager for the 362 TRS, I am looking forward to streamlining access to information distributed by the Distance Learning Office. GL
9. Download software updates. GO
10. Commercial vendors. GP
11. I understand that if you access the Internet and by mistake get into a database which would cost the government money, that Communication calls you and you can get into trouble. If someone has to be afraid of using something, then we don't need it. HW

Appendix C. Survey Responses: Section IV, Question 11

For what purposes do you use the Internet at work?

(Note: Respondent's code letter is listed after each response. Similar/identical responses have been grouped.)

1. Plan TDY travel (look up per diem rates, map driving routes, locate hotels, etc.) AD
2. Other travel information (hotels and local area maps), Congressional Record, US Code, Bills before the Congress, news of all forms about national and international events, OPM job announcements, Technology information (government & academia), vendor products, telephone numbers and addresses. AJ
3. Obtain legislation and public law. AP
4. Market research. BA
5. Other govt. servers, e.g. OMB, Treasury, House, Senate, etc. BB
6. Research for Master's program and class work--organization sponsored. BS
7. Access professional organization's homepages. access Air Staff homepage. BZ
8. Accessing regulations, transferring large files to the field. Civilian personnel information. CB
9. Use to keep current on Congressional committees and current affairs. CI
10. Access other military departments/agency, stay up on current events. CN
11. Newspapers, addresses/phone numbers. CX
12. Don't have the confidence to charge in and use these other applications--takes so long to self-help my way anywhere on the Internet I feel I'm wasting time. DA
13. Obtain bios, fact sheets to supplement staff work. Download documents required for work. Access organization chart and phone lists. DK
14. Access other military units--i.e. Army & Navy policy. DO

15. Collaboration. DV
16. Locating individuals and companies, Mapping applications (i.e., MapQuest).
DY
17. Read hometown homepage. EC
18. Our joint group uses various websites as data repositories to support working group reviews of documents. Also have used a site as a training material repository to facilitate review by a large number of people. EI
19. Federal OSHA compliance regulations. EN
20. Examine DoD policies and directions. EP
21. Anything dealing or helpful with international topics. FZ
22. Quality forums, TQM advancements. GU
23. SECAF comptroller pages for policy information, etc. HT
24. WEBFLITE (access to appellate court decisions, TJAG opinions & policy letters, USAF/JAX updates, etc.). IJ
25. Primarily legal research. IK

Appendix D. Survey Responses: Section IV, Question 12

Please describe *how* you use the Internet (excluding electronic mail) to accomplish your work. Please provide as much detail as you wish, using additional space as required.

(Note: Respondent's code letter is listed after each response. Similar/identical responses have been grouped.)

1. Access information regarding additional duties (via WWW)--security, LAN SR, etc. B
2. Obtain regulations, files, etc. from WWW pages. B C E CJ CY DE DI FJ
3. Access historical information (job related). B
4. Terrific time saver. C
5. I use all of the features listed [in Question 11] for ideas to improve my job processes and to keep current on different aspects of my job, and for career broadening. D
6. Designed and created our homepage to facilitate information sharing. E
7. Access other homepages for information, search for answers, sources, etc. E
8. Mostly general research using the WWW, trying to answer current questions of interest (i.e. what is information warfare?) F
9. I work in the AFMC Reengineering Support office. We provide through our web page "what's happening" at other reengineering sites in AFMC. When we have business process reengineering workshops for the command, these briefings are placed on our homepage for all to view. G
10. I use it to get information about projects I'm working on (mostly from the web sites of military organizations, but sometimes from commercial sites.) H
11. Look at other web pages to improve ours, get answers to questions, find things to do while TDY (city and state information). I
12. I use the Internet to post all the information on the job I do. I list all the people, their e-mail addresses, telephone numbers, office symbols and encourage users to contact these people in developing their acquisition

strategies. We also keep an updated calendar of events so everyone involved in my projects can keep abreast of the many changes. J

13. Principally for legal research. I can access the Federal Acquisition Regulation and its agency supplements, Air Force Instructions, and other sources of policy and statute. Of particular help to me in my job is the ability to access the Library of Congress' Legislative Research homepage (Thomas). I do not log on to the Internet on a daily basis. Sometimes I won't use it more frequently than once a week. My boss is a much heavier user than I am, and feeds a lot of information to me that he discovers. If I had a home computer, I might have a greater facility with it. K
14. No response. L Q AY BH BL BY BZ CE CK CP CU DC DF DL DM DR EE EG EH EM EQ ET EU EW EX FC FD FE FF FG FH FI FK FL FM FN FO FP FQ FR FS FU FV FX FY GA GC GD GE GG GH GI GK GL GN GQ GS GV GY GZ HA HE HJ HK HL HU HW HX HZ IA IF IL.
15. Accessing CFR data, FR data, AFD, AFIs AFOSH STDs, contractor sites to review products contracted, transfer data other than mail. M
16. I use it primarily to locate and retrieve information relative to my job, and to keep up on technologies being developed for computer systems. Because of my additional duty as the DP webmaster, I also find myself checking the web pages of my 3-letters to ensure compliance with current policies and instructions regarding what can/cannot be posted on our web pages. If you look at the AFPC Homepage, you'll find that we are the ONLY major command in the Air Force with a direct link! N
17. Predominantly to obtain information. O FJ GP
18. Communicate information to my command counterparts. P
19. Don't really use it that much now. But with regulations and forms on I will be using it more and more. R
20. I use our homepage to provide information (briefings, reports, etc.) to other organizations. I also use it to publicize schedules, processes, etc. S
21. To access Air Force publications and forms. T AB FJ GR
22. Find office addresses, names, etc. for other Air Force organizations. T AB
23. I access regulations, laws, travel costs, air line schedules, housing availability (I work in a CE housing group) Since our base has forms on a web site I also access forms. U

24. My job involves realigning Kelly AFB TX, access to the *San Antonio EXPRESS NEWS* page helps provide a local perspective on issues that may not be visible from a distance. It also provides the local political views on how AFMC and the Air Force is doing their job, and concerns with closing the ALC and impact to the local job market. V
25. My office updates the weekly BRAC briefing and makes it available on the web to other Air Force agencies. This weekly update is essential to surface and resolve local, MAJCOM, and Air Force concerns and issues as a result of BRAC 95. V
26. Need more training to know how to use it more before I can answer this question. Today only use it when specific instructions are provided such as access manuals, obtain forms, etc. There are other applications or information that could be used if I knew more about how to use the Internet to access the information. W
27. Access aerospace publications for general/specific information regarding weapon systems, contractors, contracts, political impact interpretations, etc. X
28. When available, I use the Internet to access publications/regulations, WPAFB bulletins, per diem rates. I use it to download forms when needed since we no longer have hard copies of all of them available within the office. I know, if I had training or time to "surf," there are probably other things I would benefit from using. Y
29. Use the Internet to research specific job related tasks. Find information on various countries, entry requirements, cultural notes, travel warnings, per diem, and information on various organizations within the other countries. This job requires research on countries and their research capabilities, as well as knowledge on their organizations and structure. The Internet is used to research this information, as well as obtain information to prepare for General Officer travel to foreign countries. Research information on the country and institutes to be visited. Z
30. Download manpower data; use locator services, i.e., telephone numbers, user IDs, zip codes, etc.; read news articles. AA
31. Read the Early Bird. AB AU DD DL
32. Keep up with the latest news. AB AU

33. Put information on web for field units to access/download information/programs. Access FAR on-line. Do general research on topics or other resources/web sites that may be useful to the field for pricing commercial items etc. AC
34. I plan my TDY travel using services such as MapQuest; I look up phone and e-mail listings and organization charts of organizations I need to deal with; I find pertinent meeting minutes, newsletters, and reports posted on the Web; I review schedules of upcoming events for my leadership (example: the Product Management Mission Element Board publishes all their correspondence, meeting agendas, briefing charts, executive summaries, and schedules on the WWW, and my two-star is a member, so I need to use the WWW to keep him informed); I check the status of promotion boards; I read and download Air Force and DoD publications; I use FTP to transfer files with other bases. AD
35. As an acquisition staff officer, much of the published material regarding acquisition reform is maintained on the 'Net--either in my organization's homepage or that of our attendant staff organizations at the Air Staff level. AE
36. Much of the time I spend on the Internet is to read news articles related to my job. Of particular use is the ability to access news files posted by other government organizations and industry to see how current developments can impact what we are doing. AF
37. Trying to find a subsequent assignment. (I have been here six years!) AF
38. Review regulations for our compliance/directions on how to proceed. AF
39. Find out other organization's organizational structure, key names, and phone numbers. AF
40. We have extensive data loaded on our homepage for access by our customers. Much of our time is spent maintaining and reviewing those data. AG
41. Obtain software and updates. AH CH ER HB HC
42. Obtain software/hardware support. AH ER
43. Obtain price and performance data. AH
44. Review MAJCOM manpower information, get biographical/organizational information, review TDY area maps, review college and university academic

costs and standards, review PME materials (Air Command and Staff College), review computer and peripheral equipment price/performance, obtain software support (on-line knowledge bases, etc.), find telephone numbers, find e-mail addresses, download software updates, Officer Assignment system, etc., keep informed through technical newsgroups. AH

45. I use it to find regulations, check for policy revisions, verify technical positions and check technical news letters. AI
46. Mostly to answer quick turn-around questions from the staff and command section. Can also be looked at as continuing education exercise to stay current on what is happening in defense and national/international scene...helps form better positions. Also provides the raw data to use in determining strategy for the next several years. Am more familiar with new business travel areas and get advance warning on weather conditions. AJ
47. As a career field manager, I spend a lot of time researching and reading regulations. I'm also in a "professional" career field, and the Internet has access to current trends and analysis that I and my coworkers use. It's also the greatest way to post information and retrieve information from other organizations homepages that I need to do my job. Beats the heck out of phone calls and running all over the base for minute and sometimes non-existent information. AK
48. Obtain information that relates to my offices mission from other services, DoD, industry, and other Air Force organizations. To share information from my office with people outside (primarily in AFMC). To find addresses that are work related. To send e mail to people when our servers are down. To obtain input from AFMC centers on issues and policies. AL
49. The Internet has become our primary tool to get acquisition reform, IWSM, and IPD information to the field organizations. Our homepage had almost 30,000 hits last month so we feel we have found an extremely useful tool to share information. We used to use faxes and e-mail to specific people but the Internet is much more efficient for us. AL
50. Distribution of information to team members across the command, or distribute guidance and training materials. Meeting minutes, reports, briefings etc. are routinely distributed by posting on WWW page rather than e-mail or direct (paper) mail. AM
51. There are several databases I search to accomplish my job. I always search Uncover, NTTC Business Gold, Thomas Register, and general searches (usually using Excite) to obtain information. AN

52. Researching new trends in military health care; keeping lesson plans updated. AO
53. Search for information related to AFMC bases in support of projects. Search for legal and regulatory information related to my program. Access information on AFMC and other homepages, to read Air Force news, and other information. AP
54. Instead of going to the Publications Library, I access Air Force and AFMC policy documents on the Web. I also use the various Air Force bases' homepages to extract mission-related information which we use in our planning and studies. Also, the Defense Link provides access to policy statements and developments at the DoD level that we take into consideration in our plans. AQ
55. I am a pagemaster for the AFMC/SP Web page, so part of my duties includes occasionally browsing around and finding useful things to add to the page. I also look up per diem information for when I travel, read various publications available on-line which allow me to keep up with trends in computers, defense business issues, and news in general. I also access (via Telnet) a couple of security-specific bulletin boards and sometimes download information via FTP. AR
56. To review current policy and regulations; to review draft policy, law and regulations (Federal Register, Federal Contracts Report), and to put in information on my areas of responsibility on my organization's homepage. AS
57. Look for information since other means have nearly dried up--downward, cross-functional. AT
58. Most use is for basic research in regulations, PA releases on other organizational homepages, my own next assignment, etc. Weather access is personal. AU
59. To stay current on changes in health care, conduct research for student projects, find out about job vacancies through AFPC. AV
60. Most of the time I have a specific action I need to accomplish. If I know where to go, I go there. If not, I use yahoo.com to search on keywords. AW
61. We use it to develop homepages for our organization and we also use it as part of the E-SERD process to develop acquisition strategy for SE. AX

62. See website at <http://www.afmc.wpafb.af.mil/STBBS> (STBBS must be capitalized). My job is to convey to industry current and future Air Force technical and mission requirements. Industry spends billions of dollars each year performing R&D targeted against what they believe to be DoD requirements. My job is to help them focus their investment on our needs. Our response from industry has been resounding. AZ
63. Obtain copies of current regulations and laws, look for contractor information, send out guidance and policy to the field, provide economic data to field, look for new ideas in other agencies, find correct names and addresses in other agencies. BA
64. Obtain direct access to information, at the source. BB
65. Review other services homepages, review homepages for potential vendors, review homepages of national labs, specific reports loaded in the 'Net. Search for specific reports on environmental issues, reports on current status of state of the art, specific POCs and firms accomplishing work, specific reports in the US Navy, US Army, other federal labs working in the same area. BC
66. I manage a base newspaper/commander's call program as chief of the internal division in an office of public affairs. I access air force news service, my command's new service, the PA career program and commander's call topics. **I used to access general research areas, but the local computer people now consider that fraud waste and abuse.** AD
67. Make information available for general officer meetings, i.e. agenda, point papers, briefings, etc. BE
68. We require each AFMC lab and center to maintain certain information on the Internet for access by OSD, DTIC and the general public. BF
69. I don't use the Internet much to complete my work. BG
70. Research policy issues. Verify current regulations, specifically the Federal Acquisition Regulation. BI
71. Access to the Federal Register, Commerce Business Daily, to order mil-specs, policies, regulations, etc. BJ
72. Link to other DoD homepages (e.g. SAF/AQ, DAU, Army SPECs and STDs homepage). I use the Internet as a tool to get more information and keep abreast of Acquisition Reform issues, training, policies, directives, briefings etc. BK

73. AFPC homepage to access assignments for officers. BM
74. We transfer Air Force technology to the public and private sector--the 'Net is an excellent tool to find potential partners. Search for companies involved with specific technologies, find other govt. technology sources, find information on various technologies, find help providers, market Air Force technology and technical capabilities. BN
75. I use the WWW to access many forms and regulations. Printing them is another story. That can be difficult, especially if they are large regulations. Sometimes just trying to read them is difficult. I use my organization's homepage just about every day to access briefings and status of suspenses. I also check the Air Force Link and AFPC homepage at least every month to check promotion and assignment opportunities. BO
76. Gain access to phone numbers/office symbols of people at other bases. Gain information on other organizations. Download official pubs. BP.
77. Access to Congressional budget documents via WWW. Access to AFPC job page--FTP of files to/from SAF/AQ at Pentagon--access to Air Force related news items. BQ
78. To locate technology/research information in the Air Force, industry and other U.S. government organizations; to gather information to help answer customer technical inquiries. BR
79. Topic research. BS CJ
80. Verify activities of other field organization activities and references through their homepages, check personnel items listed with AFPC. Do research on specific acquisition policies (such as SPECs & STDs for military vs commercial applications). BT
81. Retrieve & "park" information. BU
82. Access to DoD related policies & initiatives, i.e. acquisition reform. Job opportunities. Bookmark main areas of responsibilities I have. BV
83. Background research on other organizations is quicker and easier by Internet. Internet also give me instantaneous access to current regulations, policies, etc. *AT MY DESK* with cut and paste capability. Used in FAR reviews, policy reviews etc. BW

84. Tech Connect is an information hotline for the Air Force. We search a lot of sites in researching customer requests. A few of these sites: Uncover, BusGold, DENIX, DOD and federal lab information, DTIC, IACs, Thomas Register, general WWW searches, etc. BX
85. I man an information hotline for technology questions. We deal with the tri-service and also academia and industry. The WWW is just one vehicle used for research. CA
86. Access regulations, access base and civilian personnel bulletins. CB
87. I use it only when absolutely necessary. CC
88. Read the base bulletins, Federal Employees News Digest Publications, FAR, anything concerning contracting. CD
89. I use the 'Net in terms of objectives. In other words, when faces with a task, I first definitize the objective and what I plan to gain or find before going on-line. This helps keep me focused on the task at hand, minimize "surfing" -- on and off as efficiently as possible. CF
90. Developing, revising, and reviewing presentations; sending/receiving correspondence; obtaining forms/pubs; evaluating job opportunities; sharing information with others, etc. CG
91. I either go to a know location (URL) that has information I need or search for it using one of the search engines like Alta Vista, Yahoo, or WebCrawler. CH
92. Items are placed on our secure homepage that need approval. These are analyzed paperlessly. Overall this speeds up the whole process. CI
93. The safety office operates a good deal of time in a reactionary mode dependent upon mishap occurrence, etc. As a result, our use of the Internet is intermittent and depends upon whatever the immediate crisis is. Our primary focus centers mostly around access to regulations, forms, pubs, and trying to find answers to specific incident related questions generated by field organizations. Access to Internet is not a necessity in my case but when I do use it, it makes job accomplishment easier and a little less time consuming. CL
94. Keep current with software components available. Keep current with programming ideas. Questions/answers to specific problems. CM

95. Source of unprocessed intelligence information (for anti-terrorism analysis). Ideas for training and equipment. Career information. Job openings (secret staff). CN
96. Search for POCs on certain topics. Many documents (reference type) we use daily are on the web. Send & retrieve documents on FTP. Get electronic forms. Access AFIs & other policy in the publications on the web. CO.
97. Mainly in travel aspects. CQ
98. Instead of trying to find a copy of a regulation, I have access at my desk and can print just the pages I need. CR
99. Can find information about almost any subject--and more and more of it--and much quicker than by any other means. CS
100. To access information that normally would be found in information management office (regulations etc.), library, or other base agencies. CT
101. I don't. CV EZ
102. Bios of general officers, organization descriptions (i.e. mission, objectives, POCs, organization, etc...) writing speeches, local area conditions and points of interest. CW
103. Look up regulations, information on USAF/SAF/DoD homepages, Library of Congress data. CX
104. I use the Internet to obtain flight information for TDY. My guys go TDY all the time. I find it's much easier to look in the Internet than to call the travel office and be on hold. I am a Customer Account Representative, so I use the forms and pubs sections excessively. I look up regulations. I also load forms that are not yet available on PerformPro. CZ
105. Access the legislative information contained on the XPP homepage. Review/obtain Air Force/DoD publications. Review meeting agendas/minutes that are posted on other functionals' homepages. DA
106. Research planning initiatives, access regulations/AFIs, DoD/Army/Navy sites on long range planning. DB
107. Locate other government office information. View corporate information. Compare with what we are doing and foster creative thinking. Internet

doesn't actually save me time, but increases knowledge to do a better job.
DG

108. Access other Air Force homepages to obtain information about organizational structure and activities. DH
109. Word searches with WebCrawler and Yahoo! on Acquisition Reform and Air Force topics. Regulations review. Multi-service information/addresses. The web seems the only way to get multi-service contacts. DJ
110. I've used the Internet in gathering information for staff packages. Creating a work space for document development and updates--with Air Force labs. Research and understand terms and concepts. DK
111. Pagemaster for the organization. DN
112. Obtain current information/policy on extremists groups to pass on to the bases. Current information available for our training programs. Standardization. DO
113. Primarily as in information source for laws, regulations, and policy. Also to obtain information on current Air Force acquisition. DP
114. I rarely, if ever, use the Internet. When I do, it's to find/read a regulation to see what some other organization has on their homepage (if they call me and tell me they're out there.) In other words, I don't search. DQ
115. Look up businesses, locate people, use the Air Force data dictionary. Access Telnet to locate various data codes in the Air Force data dictionary used to input/extract data from various computer systems, and to locate codes used for personnel actions--locate contractors and businesses in various cities. Locate hotels/motels for TDY purposes. To locate and use OIs, AFIs, etc. DS
116. Provide QPI (metric) status to entire AFMC community. Benchmark strategic plans, etc. DT
117. To get information from other organization's homepage. Look at current regulations. Post information for other personnel to access, including organizational data. Get weather/travel information before TDY. DU
118. Find specific information, communicate, and collaborate. DV
119. Investigate operations research techniques and stay current with material furnished in Air Force organization's homepages. DW

120. I am a network administrator. I primarily use the Internet to solve network, server, and client problems. These problems are sometimes nearly unsolvable otherwise. The solutions often include the downloading of essential new drivers or software to make our hardware work. Often the solutions include accessing manufacturer technical databases for solutions to problems. For these reasons (and being in an office support role), I feel that my Internet access is not necessarily applicable to general work force use of the Internet. DX
121. Not sure I understand the question. But...I use several search engines (i.e., Yahoo, Excite, etc.) to find information I am looking for. I also use many bookmarks which point to specifically useful sites for research, location pointers, other homepages, etc. Sorry I can't be more specific without clarification of the question. DY
122. I use it to read regulations and guidance from OSD or other DOD agencies as well as Air Force. I look for new developments in the construction industry. I use it to read the Early Bird sometimes. I have recently used it to do my travel vouchers because the old multi-copy forms are not available any more. This form feature is not a time saver because the electronic forms are hard to use. Also, our Netscape program is frustrating because it often causes a fatal error on Windows 95 and you have to cancel out and start all over. Logging in is time consuming. Also, the frequent time-outs on our gateway are very frustrating. DZ
123. Perform research, review regulations, determine subject area POCs. EA
124. Primarily use for regulations. You have access to most recent editions for researching. Also check information from AFPC. EB
125. Once a month, I put files on BBS for others to download. EC
126. Look at safety education material, safety alerts from commercial company that may apply to military. Research OSHA regulations and overall Air Force news. ED
127. I access AETC publications library to get early access to pubs. I research safety issues and obtain civilian personnel information. EF
128. Research topics such as "electronic commerce", "systems engineering", etc. I follow hits obtained and look for sources of information to answer my questions. Generally use Yahoo! as a starting point and jump from there to other potential sites to collect information. Otherwise, I know where my information is kept so I type in the URL and go to a specific homepage. EI

129. Frequently look up AFIs, other homepages and research material to support staff work needed in the HQ. EJ
130. I am Pagemaster for my organization. Provide/obtain material concerning organization's policy and role. Obtain information and documents (regulations). EK
131. Writing policy for AFMC, I have searched the Internet to see how our policy compares to other Air Force MAJCOMs and other services and agencies. I use it to: research/read regulations and other information; obtain news from various Internet sources; stay current in various contracting issues outside the pricing arena; research training and training opportunities; research job opportunities; and work with other commands and agencies. I am currently taking an on-line course from National Defense University and will possibly enroll for an on-line course from another Defense university. EL
132. Consumer product safety issues. Regulations and other compliance issues involving safety. EN
133. I am very involved in Acquisition Reform policy, tools, and training at the AFMC, Air Force, and DoD levels. I use the WWW to work on course development (DAU, FAI, SAS, AFIT, etc.), coordinate and comment on policy, handbooks, AFAM and DoD Deskbook, etc. EO
134. I access information relevant to the work I do. Most of this is pre-identified material distributed on the WWW. I've done a small amount of searching for specific topics and some just plain playing to learn the system. EP
135. Search for job related documents at AFCA & LGS. Use news groups at AFCA to exchange job related ideas and information. ER
136. Personnel actions--mentoring, assignments for my folks. Searching for services--GSA, FSSIP, etc. Information policy updates, such as IM merger information. ES
137. To look at AFPC's homepage. Occasionally transfer a file. EV
138. Very rarely, only to access pubs. EY
139. Safety program. Administration of initial and refresher training. Enables me to track all newly gained personnel and track those that fail to achieve maximum passable score on specific modules of the program. FA

- 140.Retrieve updated information from other higher HQ (i.e. policy letters, forms current information, etc.) FB
- 141.Predominantly to obtain information, access pubs and forms FJ
- 142.I don't need to use the Internet to accomplish my job. FT
- 143.I access the Internet at home for work-related items. Most of the time it is for specific material from other bases or AFPC. FW
- 144.See our homepage, e-mail for our students, local (in country information), so the student knows what's going on at home, etc. FZ
- 145.Communication worldwide with customers. Eliminates much paperwork and mailings. Provides real-time information and weather to students from 40 countries. GB
- 146.Pull down latest versions of anti-virus software. Research equipment prices. Download forms. Obtain Internet specific training. GF
- 147.Download forms and regs from HQ AETC. Homepage in work. GJ
- 148.To find out information about other bases and squadrons. Also to find out about current news. GM
- 149.I'm one of the few in my area with Internet access. I help others research areas related to their job. I download software updates for our computer people. GO
- 150.Download graphics for use in course material. Weather reports to forecast student transportation needs. Information about other organizations. GR
- 151.As the developer of the squadron website, I frequent other sites for ideas, etc. Obtaining software updates, etc. GT
- 152.Searching for information, research, Help! Corporate ideas that we can use when benchmarking. Accessing Air Force installations, communication, personnel notification, assignments, awards. GU
- 153.Getting feedback from our customers out in the field. The customer being able to see what is now in our course offerings. GW
- 154.I only use it for e-mail. GX
- 155.We use Telnet to logon to the USAF's SMART and AFTMS systems. HA

156. Review webpages of companies that we have bought things from and download new drivers. HB
157. I write career development course material and transfer by FTD to ECI for publishing. Also use Internet to obtain technical support from computer equipment manufacturers. HC
158. Send updates and receive feedback to our exportable courses. HD
159. Update programs, provide fixes for problems on computers, hints on how to use programs better. HF
160. Don't use it except to check AFPC want ads. HG
161. TSOF's homepage was designed to allow other military members to obtain information on areas such as CCAF and conferences. HH
162. I use the Internet to research new drugs on the market to find out if there are any changes other current medications I teach. HI
163. To get up to date on new drug therapy...medical news. HM
164. I do not use the Internet yet. It was just recently installed. HN
165. Downloading software updates, DOD policies, computer troubleshooting tips, ordering free demos. HO
166. In developing presentations, many people have worked hard at their homepages. Some of those ideas make it into my presentation. I look at other radiology pages and see what they are doing. Find new ways to improve my personal productivity on the job. Keeping abreast of my civilian counterparts' discoveries and advances. Collecting information and examples that I can relate to my students. I have looked at other peoples' presentations and improved mine. HP
167. research material and provide public domain images for incorporation into ancillary study materials. HQ
168. I publish the squadron's homepage and do research in radiology. HR
169. Have it--not utilizing--plan to! HS
170. Currently, my office is working on a crosstalk to share information with other bases and organizations. HT

171. Access manpower standards, regulations, retrieve UMD information, regulations, etc. HV
172. Mostly obtaining technical solutions to computer problems. HY
173. Get new ideas/information about admin procedures and policies. IB
174. review work related programs to implement the best of the best in our program. Access Air Force Link for assignments, promotions, Air Force news. IC
175. Crossfeed...commemoration activities. Homepage information. Definitely the most time is on AFPC homepage. ID
176. Check on availability of assignments for people. IE
177. My division provides Lotus Notes network and application development work for officer personnel and we use the Internet to research solutions to technical problems. Additionally, through our Tech Connect team, the office provides a research capability to connect callers with sources of technology development within the Air Force and other services, the Tech Connect analysts use the Internet to search for this type of information. IG
178. If I knew how to use the Internet, I could use it to conduct general research, answer specific questions, search for new ideas, obtain forms, and access regulations. This would be a big help in my job, but I haven't been trained, and my supervisor considers accessing the 'Net as goofing off. IH
179. Used primarily for legal research, news reports, contacts with other offices in the Air Force. II
180. Legal research; e.g. case law, statutory law, regulations, etc. IJ
181. The law library in my building is grossly inadequate. There exists a better law library in Area B, but it is inefficient to get in the car and drive there every time I need to research. We were at one time allowed use of LEXIS and WESTLAW commercial legal data bases, but funding has been cut back. Now data bases on the Internet are practically the only way to find information I need. IK

Appendix E. Survey Responses: Section IV, Question 13

As use of the Internet becomes more prevalent, do you foresee potential uses in accomplishing your work that are not currently available? ☐ Yes
☐ No. Please explain.

(Note: Respondent's code letter is listed after each response. Similar/identical responses have been grouped.)

1. Yes [with no comments]. Q R S BG BH BJ CI CQ CD CR DB EA EH EN EQ
EU EX EY EZ FA.FB FC FI FK FO FP FR FU GB GI GP GS HF HM HS IB

Yes [with the following comments]:

2. Providing information via WWW to official and non-DOD inquiries seeking historical data. Acquiring information from DoD and non-DOD agencies and organizations. B
3. I would use my homepage to help others access my documents. C
4. I see the Internet eliminating so many of our paper processes and contributing to our paperless environment that so many office workers are looking forward to. D
5. I foresee the 'Net becoming more interactive, more user-friendly. I also see it becoming more cluttered. Perhaps several 'Nets will evolve; i.e. a Defense Net, Entertainment Net, etc. E
6. All kinds of potential for interactive use of the WWW. Updating and modifying information on-line has great potential benefits. F
7. As a clearing house for BPR "lessons learned" G
8. Direct web access to databases that now are only available through Telnet or direct connection H
9. As I become more at ease using this and am assured my bosses are using it, I can use it to schedule meetings and get back information needed for planning purposes. Currently we do this by phone calls and mass faxes, a time consuming task. J
10. Distance learning, other than through VTC and pictell and the traditional educational channels. M

11. As the technologies are integrated into the Internet we will see a significant increase in uses of the Internet, such as real-time video-teleconferencing from desktop to desktop. N
12. I might be able to access information not currently available to me. P
13. We are seriously looking at the possibility of improving our communications with the bases through password protected websites. Policies, performance indicators (metrics), program status, etc. could be posted and updated through the Web. We are also looking at the possibility of using Web-based database applications to create and update program and project databases, providing constant real-time status of our programs. T
14. I think the use of the web will continue to expand. More general information will be put on so I can do more and more research. Although it may be e-mail related, I look forward to the day that my PC and phone are connected and I have video capability so I can do mini-VTCN conference calls. Right now we only have voice and the fax to dependably review documents and discuss issues without going TDY. U
15. Yes, greater access to current information at multiple sites. V
16. The uses are limitless and again need more training to use the capabilities. Communication with other organizations and access to the information on the Internet would make my job easier if I was more efficient at accessing the data. W
17. Primarily through transfer of more information to more/new Internet users. X
18. Hope to expand amount of information obtained from the web. Z
19. Don't know/not sure. AB AT BE DD
20. Training classes could be developed using video clips and sound to provide on-the-job quick lessons for buying personnel. This would probably need to be CD-ROM based so the Internet may not be the right medium. AC
21. Possibly use the 'Net to have interactive video conferences or phone calls. AC
22. Some organizations already publish phone/address/e-mail directories on WWW; when all do, it will be easier to find people and organizations. As more organizations post publications on the WWW it will become less necessary to mail or fax documents. AD

23. Coordination could be made much easier between organizations. Information dissemination could be improved. (Right now, many of the homepages I visit are built, then almost neglected from then on. I know new issues have risen that could be explained, but isn't now.) AF
24. We are bound to make more use in the future, but those uses haven't been defined yet. AG
25. Depends on architecture upgrades. Several files of note are over 1 MB, but accessing such documents/files is time consuming or execution terminating on current architecture. AI
26. I see much more ability to conduct work away from the traditional job site...no longer will we need to be physically present to gather-up information to do our jobs. Face-to-face meetings to collaborate can be minimized. Rigorous shift schedules and the 8-5 grind for "information" managers and technicians will no longer be required. Won't need multiple copies of things for everyone...configuration management of products will be greatly simplified. Can't guess where all the changes will occur...but put the tool in the hands of an educated work force and stand back! AJ
27. The more the technology is understood, the more information and assistance will be available on the Web. AK BB
28. Six months ago I was not able to visualize where we are now. This medium is growing so fast it is difficult to know where we will end up. AL
29. Creation and distribution of self-directed just-in-time training materials to the work force in lieu of formal classroom training or policy. AM
30. I foresee more employees able to work from home in performing their jobs. I would certainly like to do that since I am on the computer probably 6 out of my 8 hours at work. When earning extended hours, my time on the computer is even greater. AN
31. Keeping updated on current military health care topics pertinent to teaching students who are new to the field AO
32. Purchase airline tickets. Electronic advertising and bidding. AP
33. The Internet could be used in lieu of TDYs or meetings in many cases. Data could be made available simultaneously to the "attendees". Discussion of issues would have to be more structured than the "chat box" approach in AOL, but the same basic capability would be used: the "attendees" could take turns with their comments, and the chairperson could call for balloting or

some other form of reaching consensus after the discussion period had ended. AQ

34. Eventually, we'll be paperless. The only way to do this is via the Internet. I don't know how the legal issues and such will be worked out, but I'm sure they will. Also, there are days when I could literally phone in my job and I think that will eventually happen. The Internet will be vital for the virtual office. AR
35. Can use more often to obtain comment/feedback from IPTs I'm involved with on work products related to the IPT. AS
36. I see CompuServe style forums as a unique and powerful information source. I use one regularly in a work related personal activity (flying safety). AU
37. Some training could be done via Internet. We could also have access to very current information to teach. AV
38. Possibly desktop teleconferencing via the Internet. AW
39. It's an easy way to disseminate information to multiple users. AX
40. Secure access to the WWW allows for the creation of virtual databases with individual owners maintaining their own data. Also, secure transmission is a two-way capability. AZ
41. Market pricing information will be a big use of the Internet in the future. This is just starting. All regulations and guidance, especially guide books, will be sent out electronically in the future. Paper will disappear. BA
42. As more live data are loaded on the 'Net, considerable time lags in learning/looking at data will be dramatically reduced. Should speed up ability to complete projects, arrive at decisions with better data. So far the 'Net is loaded with a lot of very helpful resources which is a whole lot better than finding them yourself. Also, so far there are so many resources, future engines will help sort out exactly what one is searching for...to include data (for those that will load it). BC
43. I work in PA. As more bases gain homepages, I'm able to get more information on the web. AD
44. Sharing non-sensitive data with other Air Force organizations. BF
45. More and more interaction between the "field" and the HQ staff. BI

46. Provide acquisition training via the Internet. BK
47. Increased need to use Internet to perform duties of the job. BL
48. More information coming on-line all the time. Will be more uses in the future and more opportunity to transfer technology. BN
49. Video telecommunications from my desk. Integrated phone system--no separate phone necessary. Direct access to accounting databases. BQ
50. More and more Air Force and government organizations are putting technology information on the web. We used to search dozens of databases. Now most information is on the web. BR
51. Work from home or remote site. BS DG
52. Easier and faster access to information & other information sources. BU
53. Don't know, just know information technology keeps improving and improving my productivity on the job. BV
54. As most organizations make more information available via the WWW, it will become more useful for general research. BW
55. Some sites we currently Telnet or modem to will be available through web access. Some CD-ROMs we use will be available through the web. BX
56. File transfer. CB
57. Tele-commuting: working from home or other location without the need to come into workplace. Can reduce the amount of physical work space needed and duration of use. Will be a significant management challenge to institute necessary/appropriate controls. CF
58. Direct data collection/extraction. CG
59. If we made certain information available via the WWW or an intranet, we could eliminate some briefings, TDY costs, etc. and improve the response time to get information to senior Air Force managers. CH
60. Quickly moving towards a true paperless society. CJ
61. The continuation of manpower cuts and funding reductions will necessitate greater reliance on innovative technologies such as the Internet. CL

62. Source for new ideas for business processes, employee training and supporting systems and equipment. A cornucopia of information relevant to all my business areas--(potentially) dynamic tool for all process owners to improve methods and procedures. CN
63. I foresee a homepage for each individual person. Searching the 'Net for information will be like flipping through the white and yellow pages. CO.
64. Research on acquisition issues, Congressional issues. However need training to utilize effectively & efficiently. Can waste a lot of time currently. CP
65. Available information is expanding rapidly. CS
66. Obtaining research materials, conducting surveys--since I consider myself a novice regarding the Internet, I'm sure there are other uses that I will discover in time. CT
67. Command forums, maybe desktop VTCs. Potential of electronic routing of staff summary sheets and command-wide policy, homepage for suggestion programs. CW
68. Ability to find information, replace paper copies. CX
69. Uses will probably relate to finding better ways to do one's job. CY
70. Expand our functional homepage to make more guidance/information available to users across the command. DA
71. I see eliminating paper memos that could be done over the Internet. DF
72. Video telecons. More Air Force crosstalk sites that are really related to work topics. DJ
73. I see it as a tool not only for researching information, but to collect information from the field. DK
74. Don't understand Internet enough to answer. DM
75. Information sharing among bases, joint accomplishment on required reports, "hands on" interactive training. DO
76. I would like to see all acquisition being synopsized on the Internet and eliminate the Commerce Business Daily. DP

77. Provide better communication to users. DR
78. Eliminate and/or reduce the number of hard copy files now maintained. Transmit data reports from the bases to the MAJCOM electronically, eliminating hard copies. DS
79. Greater real-time information sharing. DT
80. Cheaper way of having VTC (no expensive satellite time) when technology is available. Exchanging information with people not accessible today due to lack of computers. DU
81. I believe that Internet use will allow me to conduct business directly with the source and eliminate many "middle men." For example, via the WWW and an authorized IMPACT card, I should be able to order supplies and equipment directly from the supplier using GSA catalogs (and others). This would eliminate the need to route the request for approval through supply, contracting and finance/accounting. DV
82. Documentation and training in using access methods such as FTP seems to be unavailable. DW
83. More comprehensive resources will be available (i.e. more questions answered, more software accessible on-line). DX
84. In particular, I see the potential of on line collaboration amongst remote sites and people. Instead of sending e-mail or "snail" mail for coordination/input, on line and real time interaction should be readily available soon. Also, Internet VTC and phone applications may show some significant use increases in the near future. Especially if the infrastructure is upgraded to allow increased bandwidth and cleaner transmissions. DY
85. I don't know what the new uses of the 'Net may be but I expect many will come about. DZ
86. Access to Human Relations bulletin boards. EB
87. Once a month, I put files on BBS for others to download. EC
88. Unlimited access of information without repercussions of "someone" deciding I'm in an unauthorized section. EE
89. Easier access to publications. EF

90. As more people get access, more ideas on how to do things will arise. EG
91. Instead of mailing out hundreds of documents and correspondence, put the information out via our organization's homepage for easier access. EJ
92. Providing information covering organizational fixes for problems identified by organizations we support (i.e. mishap reports.) EK
93. I see a large volume of work transferred between services (joint groups) digitally. Currently many co-service workers do not have ready access to the Internet. EI
94. I envision electronic coordination (beyond just e-mail) similar to electronic conferences so real-time discussions can occur; electronic briefings with a variety of people connected on-line from various locations (save TDY funds); and more on-line courses. EL
95. As with any other technology, the more it expands the more information and uses will evolve from it. EO IA
96. I expect a broader distribution of information and educational opportunities. EP
97. Through the use of SSL servers, I will be able to obtain information about projects and inspections in near real-time. ER
98. More information will be available to us. Allows us to advertise our services. ER
99. Access will become more widespread and will allow for faster, more economical exchange of information. FJ
100. Yes. Possibly--yet you're dealing with a semi-skilled computer user. Plus--we don't have Internet access in my work center yet. FV
101. Access to information, places, people, things. FW
102. World wide connection (fast connection) with the people who affect/contribute to my job. FZ
103. Base maps/information for PCS, TDY etc. GA
104. Accessing personnel programs (i.e. promotion rosters, sponsor packages on other bases for customers, assignment listings.) GC

105. Access to the Air Force and AETC publication library will save time obtaining pubs by downloading vs ordering and having to wait until they come in through distribution. GD
106. More and more items are being placed on the Internet. GF
107. All forms would be available at all times. GJ
108. Having information from Headquarters and other squadrons in the Air Force helps immensely. GM
109. Higher HQ now using the Internet to make distribution of information. Right now I don't have the access I need. GN
110. More and better quality information available. Help to make better decisions. GO
111. More complete databases and file libraries. For example, more complete library of graphics available for download that can be incorporated into student study guides. GR
112. Creation of a local Intranet for squadron personnel. GT
113. Directories of offices on other bases/in other units. GX
114. Graduate assessment surveys, student feedback, class information, etc. GZ
115. Providing training data to the field, pulling in more research data. HA
116. JCALS for acquiring T.O.s by download instead of mailing. HB
117. Better and faster feedback for our exportable courses. After initial downloads, updates would be faster and more efficient. HD
118. Command publications, which are not in the instructor study. Immediate access to information provided by higher headquarters (i.e. SAF/FM, AETC, etc.) HE
119. Providing more information to the field. HH
120. Research and crosstalk amongst other education agencies. HJ
121. In many ways--searching for people, obtaining data, etc. HK

122. Researching various job related topics, ordering parts, military help desk for computer technical support. HO
123. I take work home and I use my personal account. If I could e-mail certain non-sensitive/non-classified graphics and information, I could then prevent work stoppage or slow downs due to the limited scope and ability of the PC at work. HP
124. Access to information and different ways to approach a subject allow for better training of students. Continuing education could also be done on-line. HQ
125. An idea exchange between Air Force hospitals using listservs or HTML generators. Getting feedback from the field (to the schools). HR
126. Providing customer information. Increase in customer interactions. HV
127. Coordination of requirements/responses and access to data and guidance. HX
128. Great for crossfeed, to view inner workings of other programs. IC
129. There is a lot of information available immediately on the 'Net that I believe is useful. IE
130. Distributing briefings, documents, papers, etc. via Web pages in both send and receive modes. IF
131. We market the Tech Connect capability to industry, academia, and other government offices. The Internet provides a great marketing tool which we will continue to expand. IG
132. If I knew how to use the Internet, I could use it to conduct general research, answer specific questions, search for new ideas, obtain forms, and access regulations. This would be a big help in my job, but I haven't been trained, and my supervisor considers accessing the 'Net as goofing off. IH
133. In the legal field we'll be doing an increasingly greater share of our work, especially research, via the Web. It's cheaper than dedicated on-line legal research databases, and the breadth of material is much greater. As usage increases, search engines to categorize and retrieve relevant information will become much more effective and simpler to use. II
134. WEBFLITE plans to expand to include federal circuit court decisions (at least I hope they do) IJ

135.No [with no comments] O BM BP CC CM CU CZ DC DI DL DN ED HG HY
GQ

136.No. I'm not a cyberspace visionary. I find that my normal workload precludes high efficiency in my use of ADPE in general. I can seldom schedule the time for formal training, and when I do, if find that I don't use the capabilities I have been instructed in soon enough after formal training to retain the new skill. K

137.No. Unless accessing and downloading speeds increase considerably, do not expect immediate additional benefits. AA

138.No. Already too saturated. BT

139.No. The only use is occasional, most of my computer time is spent typing documents and using my internal system. DE

140.No. Never used the Internet. FD

141.No. Use of the Internet is NOT part of my job requirements now or in the future. GY

142.No. You have to be careful and not access something that would create a cost to the government. HW

143.No. It may become "too much of a good thing." So much seems to be advertising. CV

144.No. Haven't worked with Internet enough to know. FS

145.No response. I L Y AH AY BD BO BU BY BZ CA CE CK CU EM EV EW FE
FF FL FH FM FN FO FQ FT FX ET FY FZ GE GG GH GK GL GU GV GW
HL HT HU ID HC HI IK IL

146.Don't give a damn. I'm retiring. AE

147.Possibly. DQ DH HN

Appendix F. Survey Responses: Section IV, Question 14

If you came to work tomorrow and discovered you no longer had access to the Internet, how would you conduct the work you had previously done on the Internet?

(Note: Respondent's code letter is listed after each response. Similar/identical responses have been grouped.)

1. Much more slowly. C
2. I guess I'd have to rely on the phone, mail, fax and other systems more often.
B D G
3. I would simply have to do it the old fashioned way!! Manually type documents, mail them out, use hard copy research facilities, meetings in person etc. E S T AA AP AU AS AV AD BI BK BM BP BQ BV BW CD CO CR CQ CW CX DR DU EG EK FZ EH ES GZ DF DH DS GA GB GW GX GP HT HX HY IB IC IE IF
4. Lots of walking and phone calls, returned phone calls, etc., etc. Slow, slow, slow. F
5. Phone calls and letters for information gathering. Some work would probably go undone. H
6. Visit the library and manually search for the information needed. I T BS CB CD CO DC
7. I would go back to accomplishing everything by FAX. We currently have our FAX set up for mass faxes to our panel members and subordinate units. I would go back to this as the primary means of getting the info out to everyone. J
8. No response. D K L O P W AY BD BT BY BZ CE CK CV EE EM ET EU EQ EW EX FA FB FC FD FF FG FH FK FQ FS FT FL FM FN FU FV FX FY GE GG GH GK GL GU GV HC HL HN IL
9. Hammer and chisel, stubby pencil and green logbook, snail mail for data transfer, piles of paper references. M
10. Most of what I do would have to be conducted via paper systems, i.e. books, regulations, etc. for research. I also take advantage of the newer technologies being married to the Internet, and am excited about its future.

Many of the forms, charts, etc. that I have made available to my customers on my web pages would have to be put into snail-mail. N

11. It happens all the time when our server goes down. Q
12. Make a phone call to someone that had access, if the info I needed was only through the Internet. R
13. I've been around for 20 years and know the old ways. I would just have to use the phone and mail a lot more and would depend on people at remote sites to do research for me. It would just take longer to get things done, like it used to. U
14. A more labor and cost intensive process would be necessary to copy and fax the information to various sites, and task the remote locations to copy and fax information back to us. Information sources currently available on the Internet (EXPRESS NEWS) would not be available unless we subscribe to the service and wait for the delayed delivery by overland mail. V
15. Again, would have to go back to manually accessing the forms, manuals, etc. and rely on printed copy. Also, could not communicate with home office. Would drastically reduce the effectiveness of my office staff. W
16. Some via telephone as before Internet, some not done at all. X
17. I couldn't-- because regs and forms are now accessed through the Internet and not kept in hard copy form. Y
18. Research through libraries, phone calls, personal contacts, mail. This would be much more time consuming and more likely to lead to dead ends. Much of the information I can obtain on the web is not readily available in many libraries. Z
19. I would need to go to various organizations to obtain hard copies of documents. AB
20. By paper letters and FAX. Not having access to the Internet would greatly restrict the amount of information available, as well as the diversity of information available. AC
21. By making phone calls to get information and to request that documents be mailed/faxed to me, and by traveling to libraries of regulations and other publications on base. AD
22. Leg work and personal contact, i.e., phone and the fax. AE

23. Spend more time on the phone and reading trade journals and specialized newspapers (i.e., Defense News, Space News etc.). AF
24. The Internet provides an additional way to provide information to our customers. Other (less convenient) sources are still available to them if the Internet were not available. AG
25. For important local info, I would walk or drive to the desk or building where the information was. For other important work, I would use phone, fax, e-mail, letters, or TDYs as necessary. For the "nice-to-have" data I find for other people (since it only takes a minute) I would tell them to find it themselves or do without. AH
26. I would have to go to publications libraries who in turn would download the documents from the Internet. AI
27. Would need to start rebuilding my old library of good info stuff and begin relying on snail-mail to obtain needed information. Couldn't be responsive to my customers until all the old crutches were back in place (pubs, forms, OAG, phonelists, faxlist, yellow pages-business to business, area maps, subscription services for a variety of media...). AJ
28. Through time-consuming coordination. Errand to the publications library. Killing a few more trees to keep reference material on-hand. It just wouldn't be pretty. Take away my computer and give me an old typewriter, the analogy's the same. AK
29. Much less efficiently. We would go back to more faxes etc. In fact I don't think we could do the job any more, because we do more today than we could ever have done two years ago. AL
30. Some would not get accomplished. E-mail and paper mailings would hit fewer people. Net effect would be to slow the pace of change. AM
31. I would have to go to the Wright Lab Tech Library or the AFIT Library and manually do the research there. (Uncover and Thomas Register). For the NTTC database, I would have to search their directory manually to find the right abstracts for my projects. This would be "hit or miss" as I would not have word-search capability. I would lose out on the general searches without the WWW. AN
32. I do very little on the Internet now; would depend on my home access or copies of documents from other users AO

33. I would resort to less productive ways of operating, such as phone calls and searching through paper files. AQ
34. I have absolutely no idea. What I do using the Internet probably wouldn't get done or would require a lot longer to do it. I'd be forced to revert to the telephone or, worse, the U.S. mail. AR
35. Ask more questions of bosses, co-workers and functionals. AT
36. As I said in question 11 [in section III], I could do my job without the Internet. I would just have to spend more time doing research, thus yielding longer turn-around times on tasks. AW
37. We would have to order all regulations from Publications and develop a paper/mailling process for SERDS. AX
38. It could not be done without the Internet. AZ
39. Call the Pentagon and get the information faxed to me, mail and fax guide books to the field or print materials at great expense. BA
40. As before, manual research, obtain and maintain many references and publications, increased use of fax and WATS as well as DSN. BB
41. Work out of libraries, make shot in the dark telephone calls, ask for paper copies, e-mail vice downloading from the 'Net, increase project delivery estimated completion dates. BC
42. Send out disk or try to use e-mail, however not effective/efficient for large files! BE
43. Spend more time bureaucratic letter writing. BF
44. Have to send faxes of reports or mail reports to centers if we were not able to put on our homepage. BG
45. Would have to visit a pubs library to see certain pubs. BH
46. It would take more time, require phone calls, trips to libraries, etc. BJ
47. Our only source of regs is on the Internet. That would "severely" limit performance. BL
48. Good question--we have other databases available, but none as powerful or productive as the 'Net--big productivity loss. BN

49. I'd have to search out hard copy of regs and forms. Also, I'd have to wait for the hard copy from the front office on suspenses. Right now I don't have to bother them with it. BO
50. Would have to receive files on disk via mail. BQ
51. Gain access to dozens of other databases--make more phone calls and more visits to the technical library. Take longer to get things done! BR
52. Pick up the phone, fax, VTCs--don't think I'd miss it. Just would take longer. BT
53. Find another machine to work on. BU
54. Would have to spend many hours on the phone, using CD-ROM, manually reading and researching. Would be devastating! BX
55. Use the telephone--ours is a quick response hotline--kind of defeats the purpose, huh? CA
56. For a hopefully short period of time, I may be dead in the water; given that I would need to re-think how I would accomplish certain tasks. Hopefully, alternative or previously used methods will still be available and will not have been phased out. CF
57. Via phone calls or fax, or not at all. CG
58. By phone and through publications like those in the technical library. CH
59. We would have to push the paper again. CI
60. In a very time-consuming manner. Have to wait hours, days, weeks, etc. on information. CJ
61. We could do it as before but it would be more time consuming and less efficient. CL
62. I'd have to read (and buy) more publications. I would also have to do at home the work-related web-searching I now do at work. CM
63. Back to the future. Old methods, time consuming, limited resources, etc. CN
64. I don't rely on Internet to do my work; however, it enhances it. CP

65. Would require a lot more library research, but still couldn't duplicate results.
CS
66. Same as I did before Internet--go to appropriate source to get the necessary information. CT
67. More use of telephone, library and TDY. CU
68. Obtain paper copies. CY
69. I would have to call the travel office and be wasting time by being put on hold. I would have to keep a hard copy library of all pubs/regs that I use (A LOT!!!) instead of being able to easily access them on the 'Net. CZ
70. Obtain hard copies of the information I need from the Air Force or command OPR. Get copies of the Federal Register. DA
71. Probably wouldn't do it--in the planning function it is beneficial to find what is available that others are doing/proposing. DB
72. Only use I have for web is daily Early Bird. I would just go upstairs to the command section and reproduce a copy. DD
73. I would go to the PDO for pubs and forms, get bios from the front office, go to the source for research material. DE
74. Would not accomplish--life would go on. DG
75. Obtain hard copies of pubs. Obtain forms through PDO. Call POCs. DI
76. Visit Air Force technical pubs library for 1 hour a day and waste all day trying to find phone contacts. DJ
77. Use technical library, make lots of phone calls, collect a lot more paper files.
DK
78. Since I rarely use it, it would be a long time before I found out I didn't have access. DM
79. Wouldn't be doing much of anything. DN
80. Find someone who had access, research at the library--time away from job!
DO

81. Revert to a forms file and a publications library. Also rely on fax, e-mail and priority mail from information sources. DP
82. Couldn't. DT HE
83. I'd have to spend a lot of time on the phone or wandering the halls trying to get information (or find out who might have the answer to my question) and burn up the fax machine sharing information. DV
84. It would get done in a very laborious and time-consuming manner or it wouldn't get done at all. DW
85. Phoning hardware and software manufacturers for answers to problems and availability of software updates (Note: In some circumstances I have spent many days on hold and on the phone with technical service reps to answer a single problem.) DX
86. I would RETIRE!! No, seriously, I guess I would revert back to using the publication library, regular library, the publication distribution office, hard copy forms. My telephone would become much more important to me. I would have to call people in different offices/organizations to obtain necessary information, etc. DY
87. I would have to spend more time in a library, and I probably would not learn as much. DZ
88. Via telecons & meetings. EA
89. I would need to physically visit pubs library etc. And make copies of pertinent information. EB
90. Mail copies of files to everyone. EC
91. Some of the information we wouldn't get at all. We would have to research safety publications, which is time-consuming and by the time we get to it, the information is old. ED
92. Return to relying on other offices to obtain publications. EF
93. Painfully slowly, due to the volume of paper involved with document reviews (and an outdated e-mail system). We couldn't afford to use a fax. We'd have to revert to mailing comments/documents back and forth. EI
94. Maintain a huge library of AFIs taking up space and having to have the other bases send out supporting information via fax, e-mail or mail. EJ

95. Telephone tag; e-mail; TDY; be away from my desk doing research in technical library, etc.; paper copy; mail. EL
96. Review manuals/phone calls etc. to vendors. EN
97. Not very well. I would have to revert to the telephone, letters, FAX machines, etc., to accomplish the same amount of work. There would be an extreme TIME impact on my job. EO
98. I would spend six to 8 hours on the phone calling other bases to get answers to technical questions. ER
99. Get someone else who has access to do it for me. EV
100. Would not greatly affect me/no impact. DL EP EY EZ FD FR GJ GQ HH
HW IA IH
101. I do not use the Internet at work. CC DQ FE FP GI GY GD HK
102. Paper/legwork. FI
103. More slowly. FJ
104. At home FO
105. Very little of my military job requires Internet use. FW
106. Back to old system which worked, but was not as computerized or efficient.
GC
107. Modem. Bulletin boards. GF
108. Phone calls (DSN) and maybe not able to do some of the work. GM
109. I do not have access right now, so nothing would change--business as usual. GN
110. I primarily use the Internet to download software updates for our computers. I can do this at home if necessary. GO
111. Physically go to various agencies to find the information I need. GR
112. Phone calls, go to MPF, etc. GS

- 113.Revert back to doing work at home during off-duty time. GT
- 114.Back to the old days of telephone messages, and more PAPERWORK! HA
- 115.Long distance phone calls and buying software updates. HB
- 116.We would not be able to do it. Everything would have to be paper based.
HD
- 117.Provides information on Windows 95 and now programs would have to buy
all required references for each computer program. HF
- 118.Don't use it except to check AFPC want ads. No impact. HG
- 119.By using research books. HI
- 120.I do not use the Internet to accomplish my job. I do see research could be
enhanced. HJ
- 121.At home on the 'Net, or go over to the hospital to do medical information
searches. HM
- 122.We download software updates, so we would have to contact the company
to get it by another means (which could potentially cost money). HO
- 123.Go home and do it off duty (until the job was done). Instead of working an
hour two at work, then two or more at home. HP
- 124.I would do my Internet work at home. HQ
- 125.At home...just like I do now because we do not have an HTML editor in our
section. HR
- 126.At this point, I haven't had the time or taken the time to really use the
Internet. HS
- 127.Wouldn't make much difference--I haven't been trained on how to use it. HU
- 128.Would have to use hard copies of information. HV
- 129.Looking at assignments--biggest impact. ID
- 130.Research would have to be done over the phone or through paper manuals,
significantly slowing the process. IG

131. I'd do it the old-fashioned way: with books and phone calls. Right now that's OK because we still have the books, but that will change over the next few months and years as we eliminate the books in favor of Web-based resources and CD-ROMs. II

132. Via bound volumes, most of which are no longer up to date. Would likely need to drive to University of Dayton law library in downtown Dayton, or consult with US Attorney's office or Air Staff. Would be HUGE increase in time required. IJ

133. Would be much less efficient. It would cost me more to use commercial legal data bases and burdensome to get in a car to physically drive to an adequate law library. IK

Appendix G. Survey Responses: Section IV, Question 15

What do you think the Air Force's policy *should be* regarding Internet use?

(Note: Respondent's code letter is listed after each response. Similar/identical responses have been grouped.)

1. Use for official business, with lenient definition of official (similar to current policy). B
2. Liberal! Quit scaring us with "witch-hunt" stories. I was hesitant to open "Aviation Week" due to fear of prosecution. C
3. Liberal use with work-related tasks only. D
4. Perhaps access to the 'Net should be given to those who show the need for it. For those who don't need it, remove it so they don't use it for primarily personal reasons. E
5. As liberal as possible but forbidding situations that would be embarrassing if seen on 60 Minutes. F
6. It should be utilized where it makes "sense" to conduct our "internal" business. There needs to be standardization within the AFMC enterprise on information provided by the various homepages. Security is another aspect I am concerned about. Aggregation of information can create information that might be classified or sensitive. G
7. No restriction as long as it's work-related. H
8. I think it should be liberal I
9. I think that Internet usage should be allowed during non work hours, such as lunch or after work to conduct educational research. I also think the Air Force should be encouraging everyone to use the Internet as means of getting the information to the troops faster than we currently do. One problem is proliferation of data. In the past, we had individuals at bases who decided where the message would go and would ensure that the general populace got the information, via base newspaper, bulletin, special letter from the commander, etc. Now the information can be posted and if someone is not keeping an eye on the Internet your shop, may get passed by in the offing, as ignorance is not an excuse. J
10. If the technology permits, pornographic and non-job related homepages should be blocked from access on Government computers. It has the

potential for being a colossal time waster in the hands of undisciplined individuals. K

11. No response. L AY BD BL BO BY BZ CE CK CZ DL EH EM EP EQ ET EU EW EX FF FG FH FJ FK FU FV FX FY FL FM FN FP FQ FS FT GD GE GG GH GK GL GM GS GU GV HC HI HL HN HU IL
12. Complete, self-disciplined use with occasional random monitoring after defining 'policy.' Whack the user who routinely and blatantly disregards the policy for touching the wrong sites. Accidental site touching will be obvious. Porn transporters belong to the JA folks for execution. M
13. I believe the current policy is reasonable; prudent about what to make available, ambitious about the ways it can be used. N
14. Let us use it to do our job. P
15. Bill Gates was once asked by a group of DoD interviewers how he regulates the unauthorized use of the Internet. Bill looked at them straight in the eye with surprise and said "regulate it, I want my employees to use it for everything. I want the Internet to be the first place they go to make luncheon plans, call their girlfriends, pay their bills. I am trying to make the Internet a way of life."

My views:

Screen for perverts viewing pornography.

Treat it like any other time waster an employee can abuse (coffee and smoke breaks, hours spent reading newspaper at desk or in rest room, extra long lunch hours, etc.). Hold that individual accountable. Don't try to regulate everyone for the misuse of a few.

Make it available to everyone. Especially E-Mail. Q

16. For official use only. R S Y AG AO AX BP BV CG CT DI DQ ER FG FK FU GD GM HF HG HK HO HY IJ
17. I think the current policy is very clear. Official use only. I may be making the wrong assumption that my curiosity about news, weather, professional information, etc. is "Official". T
18. It should be encouraged and the best tools provided. It must be controlled to keep abuse in check but that should be done by the supervisor just like any other form of "goofing off". Our jobs are really all about handling information, we really don't make anything, the Internet is a perfect tool of improved productivity. U

19. Encourage liberal use after adequate training is provided on proper use of the Internet. V
20. Basic policy should be to specify the policy and the do's and don'ts and let each supervisor discipline the process. The first and second level supervisors should be held accountable for their subordinates. (Electronic "snooping" etc. should be held to a minimum.) W
21. Expand numbers of folks having access, allow unlimited use, continue to monitor for improper usage, continue to provide periodic guidance on what constitutes inappropriate and other misuse. Most people recognize the need for monitoring, recognize that some misuse exists and it is necessary and appropriate for those instances to be punished. I would recommend more general publicity be given to punished instances of misuse. X
22. IF the organization can justify a use for it, encourage the use of the Internet. However, as with any computer resource, personal use should be restricted. Z
23. I think the policy is fine as it is. O AA BX CB CM DN DR DU EI FI GO GW IK
24. Common sense should prevail. Internet users should be able to access anything at any time unless it is (1) offensive (i.e. pornography, violent, raunchy material, (2) done to accomplish illegal activity, or (3) negatively effects job performance. AB
25. Official business only, period. The equipment, software, and phone line expenses are paid by taxpayers, and they have a right to expect us to be good stewards. Personal use should not be permitted. Baseball scores are not official business; weather at TDY location, maps of bases, phone lists, promotion status, career plans, graphics for briefings, PME study, and current events are official business. AD
26. Limit access to DoD homepages. Seriously, I see too many people wasting their time (and mine) just sitting at their desks surfing the 'Net (and pulling up topics that have nothing to do with their work). It's as bad as when we all had *Solitaire* first installed with our Windows programs. AE
27. For official use only during duty hours. However, this should be relaxed during lunch hours and off-duty time. AF
28. "Internet" use should be treated the same way as telephone use. This means it would be subject to monitoring, but the primary responsibility for preventing abuse would reside with the supervisor. "Commercial" use would

be strictly forbidden, but incidental use for personal reasons would be allowed. (i.e. making a medical appointment, leaving a message for your spouse, checking to see if your dry-cleaning is ready...) AG

29. As the Internet grows, these types of activities will be ever more common, and an excessively restrictive system will become increasingly beyond our resources to monitor. AH
30. Access to Internet for all personnel. However, punishment for misuse should be enforced. AI
31. This should not be treated like paper of the 30's or telephones of the 40s-50s and faxes of the 60s. Put the best possible secure tool into the hands of an educated work force and let them experiment to find ways to improve their business life. Quit focusing energy on personal use and the 'Net Mafia. We won't be able to control the experimentation, nor will we be effective in using Gestapo tactics to prohibit personal use (remember when we tried to control pens when we used paper, and we tried to squelch personal calls when we relied on telephone, or copying "things" when Xerox became a household word, or worry ourselves sick about folks faxing unofficial stuff). Lets spend our energy figuring out how to encourage folks to embrace the technology early and use it effectively to stretch our meager resources. We can draw and quarter the folks that really screw-up and can't get their job done because they are playing on the Internet. Let's find ways to immerse folks in the technology. AJ
32. I'm comfortable with the current policy. The CSAF has spelled it out pretty clear in his message. I'm uncomfortable with the way some folks interpret that policy. People are afraid to use the Internet for something that may be construed as non-job related. For example, I work at the command chaplain's office and we have a homepage. The chaplain is an essential element of any Wing or Command structure. Our website maintains information concerning the chaplain service and links to other sites with religious information. I had one person contact me to see if it was all right for her to access my site since it was not specifically related to her job. That's a pretty rough interpretation by her supervisor concerning a site that is maintained by an organization charged with ensuring the 1st Amendment Rights of providing for the Free Exercise of Religion. AK
33. Use it, Use it, Use it! Do not do what we did with computers when they first came into the Air Force. Each one had to be justified, we tracked usage, we worried about how people would use them. We did not want to buy anything if there was not a FIRM requirement. No one would ever need a color monitor or a hard drive. Today we understand we need to get the best equipment we can with the resources we have.

34. We need everyone in the Air Force to have access to the Internet ASAP. Every computer, every LAN (except perhaps classified systems) should be able to access the Internet. We have a much better ability to track and monitor use of the Internet than we do things like travel funds so I think it will be easy to police. In addition my experience has been that while Air Force people may experiment with a new system to learn how it works they quickly move to a focus of how this tool can help me do my job better. I believe that "abuse of the Internet" by Air Force employees will be very low. AL
35. Current policy is adequate. There should not be lots of additional policy-- liberal use to grow the pool of users and web page builders. Investments in training and web authoring tools that allow novices to create basic web pages to accomplish basic tasks would help us cope with a shrinking work force, and improve communications across geographic boundaries (i.e. ALCs and product centers...). AM
36. I think the Air Force policy is fine but somewhat restrictive. Sometimes when doing searches, I come across interesting items that are not job related. I'm half afraid to read or download these for fear of reprimand. Most of this type of information is discovered accidentally, not the subject of my search. But once found, why not be able to indulge a little (as long as it doesn't take too much time!) There's a wealth of information out there begging to be accessed! AN
37. Official use only while on government time. Allow personal use while on lunch time or other designated personal time. Create/enforce non-access rules for pornography and other unethical, amoral sites. AP
38. Use of the Internet should be encouraged in conducting our basic business functions. Unclassified, non-sensitive information should be readily available to all users. I'm not sure that the Web will ever be secure enough to handle classified information. AQ
39. About what it is, actually. It's rather vague, but it says the right things and leaves most issues up to the local office or supervisors. Attempting to force a particular philosophy or setting up some sort of way to enforce an ill-conceived Internet policy will simply slow down the inevitable move to electronic imaging and business process vs those run via paper. AR
40. Use as much as possible to accomplish work. AS
41. Should train individuals on how it can help in their work, then encourage effective use. AT BF BG IH

42. I think current policy is satisfactory. Personal access should not be discouraged any more than hanging pictures and plants in and around one's desk. As long as it is not inconsistent with the work environment, I think personal use should be allowed. I also think the USAF should keep abreast of the capabilities and weaknesses of the Internet to exploit the resource as much as possible. AU
43. Should be for work-related only. However, encourage some exploring to find out things that are work-related. That is, encourage word searches to find out new ideas, etc. AV
44. The policy should mirror the policy on computer access to avoid any confusion. If it is legal to access a computer to perform a function, it should also be legal to access the WWW. For example, there was time when you could use a government computer to do work towards a master's degree. If this were still true, you should also be allowed to use Internet access. AW
45. Policy must be innovative. WWW has tremendous potential to save govt. money and time. WWW provides ability to transmit vast amounts of data to users worldwide. AZ
46. Use it routinely to send out all guidance. Worry about viruses but not about occasional personal use. BA
47. As with any valuable resource, it should be made available to all who can benefit and be safeguarded from abuse. BB
48. Full and open access to all. If abuse takes place, permit supervisor to deal with it like any other disciplinary issue. Do not set up automated monitoring...Air Force does not in any other area, why this one? BC
49. Free access, except for pornographic sites. As a PA professional, I would use the Internet to keep up on world events affecting the Air Force, and other information sites which could improve our base newspaper. However, the computer Nazis have determined all but other base homepages are off-limits. Air Force is WAY too paranoid about the Internet. AD
50. Somewhat liberal policy--I think we're just touching the tip of the iceberg--foresee benefits from a liberal policy. BE
51. More training, encourage its use. Use judgment regarding personal vs work related. Note: my 8th grade son uses the Internet a lot in school. In a few years, when these kids get into our offices, computer usage will increase dramatically. We need to get current employees more involved now. BH

52. Must be business related. BI
53. As liberal as possible. It's a must for anyone who writes policy. BJ
54. I think that current policy within AFMC is acceptable. Only for job related tasks (no personal usage). BK
55. Use it, but appropriately, within reason. BM
56. Free and open *except* porn, racist, and other prohibited material. BN
57. Unlimited, except for illegal activities (i.e. porn, conducting personal business for profit etc.) BQ
58. Open/unlimited use--it's one *powerful* tool to get technology information fast. The only restrictions should be on sexually explicit, racially/politically incorrect and other "dark" areas. BR
59. Work on official, school-related. BS
60. Put a "V" chip in for the immature people that can't restrain themselves, thus limiting the "channels" or web sites they can access, otherwise unlimited to research sites. BT
61. Mostly business, some personal. BU
62. Do NOT deny Tech Connect access to any website. This hinders us from performing quality research. CA
63. Even without the Internet I find I have way too much to read that is "nice to know and can expand my horizons", but is not totally necessary for me to accomplish my job. The Internet expands this information-glut exponentially. If I really got into it, I could spend 8 hours a day surfing the 'Net for job related information, and not get a single thing done. At some point the employee needs to stop ingesting information and be productive.

So far, I think all the job related information I need to know is directed to me, so I don't have to go looking for it.

My neck and eyes get tired enough looking at a computer screen. I don't want to have to go to it every time I need to read or reference something.

Therefore Air Force policy should not encourage the development of practices that make the use of the Internet mandatory. It is my understanding that there is already a policy that we cannot use the Internet

for non-job-related activities. Internet use as it relates to productivity, should be a major factor influencing the policy. CC

64. I have mixed feelings concerning this subject. It is very tempting to surf the Internet when it is readily available. CD
65. Liberal as long as productivity continues to increase and prudent discretion is used. The 'Net is a tool to be used effectively; effectiveness comes with practice and frequency. Liberal policy should include casual use (news sources, leisure reading, leisure research, etc.) extreme abuse (i.e. personal [financial] gain, porn, etc.) will be dealt with appropriately. CF
66. Expanded use. Information sharing with access restricted to appropriate agencies/offices. Consider developing intranet for higher security. Desktop conferencing with video and audio. Electronic whiteboard for team projects. CH
67. Whatever it is, it should be published and widely disseminated. I have lost training opportunities because no one knows the policy. I wanted to take free Internet course offered for a limited time. Since the local wing has put out many threatening letters on Internet abuse, I tried to find out how to take the free course with official approval. By the time the system could respond to my question, the free course period was over and a fee was required. CI
68. I think it's fair now--for use to assist you in the performance of your job. CJ
69. I think it should only be used for work related activities but the problem is how does one gain experience in using the Internet and knowledge concerning what's on it when you only use on an intermittent basis? Example: I was looking at Wright State University's homepage for some information when I found a local list of restaurants that we subsequently used as a handout at two seminars we were sponsoring at WPAFB. I definitely think the use of the Internet for pornography and such should be forbidden in a working environment. As a result, the Air Force will have to rely more on the integrity and responsibility of its personnel or implement restriction that will hamper the user in fully applying the Internet to job accomplishment. This will continue to be a problem since there will always be abuses of any system. CL
70. Either liberalize use (restricting access to undesirable sites) or *eliminate it altogether*. It's counterproductive to have "Big Brother" monitoring your actions and being unsure if you're accessing an "unapproved" site! CN
71. Liberal access, but not to sexually explicit areas. CO CU CX IE

72. Use should be encouraged. However, it seems "everyone" has a homepage and I sometimes question the reliability/dependability of all the information out there. CP
73. Work-related only. Strictly enforce abuse guidelines (i.e. porno, etc.). CQ
74. Use as needed for business or personal as long as you do not obligate the government in any way; as long as it is not illegal, obscene, etc. CR
75. For official use only except during breaks and lunch hours, at which time personal use should be allowed. CS
76. Work only and set policy after WWW is in use for more than a year (it is growing so fast, policy could not keep up with if set too soon. CV
77. One that is liberal enough so that one doesn't feel unduly restricted in the ability to use this potentially valuable tool. CY
78. Controlled, business only. Not an official means of transmitting info/tasks/etc. Until access is available to 100% of target audience. Personal comment: it is already being used too much, too quickly by some functions and because of a lack of training, I have difficulty getting needed information. DA
79. *Minimize* use of graphics on Air Force sites. Too much time is wasted while graphics-intensive homepages are being downloaded. DB
80. Leave up to supervisor. DC
81. Access to home improvement, gardening and other non-official media should not be allowed; access should be denied! DD
82. I think unless it is official business, personnel should not use. It seems personnel are using the 'Net to browse (because it is neat) instead of completing any real work. Computers have saved us a lot of work but have also caused a lot of wasted man-hours due to misapplication. DE
83. I thought policy usage was already out. I see in the future Air Force's policy expanding on more usage (detailed guidance) as we move more to a paperless society. DF
84. Encourage use--even exploration which is not business related. Within reason, of course. DG
85. Same as that for telephones. BW CW DH

86. Neutral but forgiving. More interested in what work is being accomplished on Internet. How to improve rather than convict. DJ
87. Its use should not be restricted (except for use for profit or immoral ways). Getting your job done is the responsibility of yourself and your boss. DK
88. If the Air Force intends to use the Internet as a standard business tool, then there should be an overall implementation plan instead of just haphazard usage. DM
89. Liberal use--mission first as always, but after hours, academic use OK. We're always encouraged to better ourselves, (i.e. continue our education)--why can't the Air Force help? If we're happy at work, we'll be more productive! DO
90. It should encourage use of the Internet for official use only. It should require training of all personnel in how to maximize its benefits. I offer these other comments for your consideration: just like e-mail, just because information is posted on the Internet, that doesn't mean people instantly know it is there or whether or not it is relevant. One could easily spend all day, every day surfing the 'Net and not accomplishing their job. There is a tremendous amount of information available. How does one efficiently sort through all this for relevant information? How often does one revisit pages to see what is new or different? Unless there is specific information you need and can access immediately, the Internet can be a tremendous consumer of one's time. DP
91. Use it to the maximum benefit of the Air Force, and to accomplish jobs, but do not abuse it for personal use. DS
92. Policy is stupid...we have a phone policy but people use it as they see fit. Pursue people who do illegal stuff (i.e. porn) but leave it alone otherwise. DT
93. Strongly encourage Internet use (exploration and posting). Limit only obviously inappropriate surfing i.e. pornography. Establish a research and development effort to share and protect classified information via the WWW. DV
94. Internet use should be job-related and not personal. Training should be provided for the more technical modes of use. DW
95. Primarily restricted to business use with some personal/pseudo official use for things such as news and weather and work related sites. However, I feel

this is impossible to enforce and enforce fairly. I use many computer related sites which would appear to be purely personal at first glance, but I use strictly for the needs of our network. I also know that many people waste plenty of time on the Internet in places that are typically acceptable sites.
DX

96. I think the POLICY is fine. I think the Air Force needs to train and market the policy better in order to ensure understanding and compliance. Most people want to do a good job and want to follow the rules; but, if they don't understand it or are unaware of it, the consequences can be disastrous. DY
97. Make it available for work related uses and some less structured browsing - overall information awareness is an asset. DZ
98. Liberal use policy. Maximize information available on Internet. Maximize availability/access to Internet. EA
99. The Air Force pays for the service so I feel it should be directly linked to your job. (As it currently is, I feel it is a good policy.) EB
- 100.If we have access, let us use it for everything. EC
- 101.Computers are supposed to be used for official use only, so Internet use should go along with that. ED
- 102.I've been afraid/nervous to access the WWW/Internet due to "eyes" questioning the areas I might search for information. EE
- 103.Official use only to include quality of life issues (i.e. job search, networking, home/house hunting to new assignments, medical questions.) EF
- 104.Use it for work (unclassified) as much as possible. EG
- 105.Liberal. Get as much out of the Internet as you can within legal and moral constraints. EJ
- 106.It is a tool, like a pencil, telephone or gun. Its uses are still being developed. Try to be aware of others' successes and failures in using the Internet and emulate the useful. EK
- 107.Not sure. There's potential misuse of Internet; however, that can be said for any Government-provided tool. EL
- 108.Strict. EN

109. Maximum use. EO
110. Give it to everyone with a need. ES
111. Should be allowed for educational purposes and official business. EV
112. Limited to mission accomplishment. EY
113. Train people and then pass it out. EZ
114. Universal adoption. Don't just install and leave it for the worker to muddle through. FA
115. Everyone should be connected or at least at group level, with training. FB
116. It's a great idea. It's just that I need to learn how to use it. FC.
117. I really don't know. FD GA
118. No access allowed at work. Too many people would get caught up in other non-related things. FE.
119. Expanded where possible. Resources galore are available via the Internet, but its use needs to be monitored to prevent fraud, waste, and abuse. FO
120. Complete but monitored access. FR
121. Obviously--official use only--with stringent controls. It would be extremely easy to abuse this system or use it for other than its intended purpose. FV
122. Free access with the pornography issue being addressed. Several civilian companies find their employees spend too much time in porno areas while on the Internet. FW
123. USE IT!!. Under strict control and monitoring. FZ
124. Limit use to number of offices. Each office should have access. Punish those that abuse the privilege. GC
125. Provide training. Allow its use for official functions of course, but also permit its use for those who are going to school, PME, college, etc. GF
126. Air force information requires special release. We need to keep contained for the individuals who need to know and only them. The Internet is a large grapevine. GI

- 127.FOUO. The Internet can be just as addictive as Solitaire was--limit access or times available to those who need it to conduct their job. GJ
- 128.If higher HQ is going to use it, then make funding available so that everyone who uses information that is on the Internet has the right hardware/software. GN
- 129.Very careful. A big issue. The Air Force will have a hard time controlling this. GP
- 130.The development of strict guidelines. GQ
- 131.Wide open, as long as the activity does not bring discredit upon the Air Force. GR
- 132.Everyone should have access. GB GT IB
- 133.FOUO. Subject to monitoring, taking appropriate measures to safeguard sensitive data. GX
- 134.Block use unless absolutely necessary. GY
- 135.I like the one in place now--basically prudent use over a limited time! GZ
- 136.The USAF should have 100% access for everyone. We need to get in the groove of the information super-highway. I still know people who use typewriters with carbon paper! HA
- 137.FOUO--unrestricted. Private use--as long as it doesn't take up work time and not for profit. HB
- 138.Free access to all information pertaining to our job areas. HD IC
- 139.Highly encouraged. HE
- 140.Current policies are good...you need the control to prevent misuse. HH
- 141.Train personnel, allow access for official use (research, crosstalk, communication with civilian agencies, etc.). HJ
- 142.Air Force should encourage Internet use; however, hold member accountable for any responses made. Should prohibit pure personal use on government access--that's what home access is for. HM

143. Job related items and sites should be accessible. There should always be a firewall present. Anything of a COMSEC/EEFI nature should NOT be on a homepage. Conversely, no personal information beyond name and rank should be made available. HP
144. Internet access is an information tool. Policy should be based on existing policies governing such tools (i.e. telephone, television, fax machines, etc.) HQ
145. Internet usage should be encouraged--however--I really believe we need to pay attention to what goes into our pages. We should be very careful about revealing personnel assigned to units and Air Force doctrine. We can sometimes forget who's on the other end of the web. HR
146. As with any other new technology, utilize to its fullest capabilities, without abusing. AC HS HT
147. Encourage members to experiment as long as it does not affect productivity adversely. HV
148. If you have access to something, you should be able to use it without fear of getting into trouble. If allowed to use and there are certain things you can't access, then put a block on it. HW
149. To integrate with other government agencies (military and non-military). It is CRITICAL. HX
150. I think there should be periodic training sessions given. IA
151. Define what you can't do...where you can't go. Security. ID
152. Publish guidelines and regulations regarding appropriate use, then punish offenders when they are discovered in their place of work by their supervisors, as opposed to the "Network Police" monitoring all activity (as it is now). IF
153. Internet access should be made available where it is needed to accomplish one's mission. A person's use of the Internet should not hinder his/her work but rather, facilitate it. If this is not the case, a close look at what it is being used for should be done. As more and more information is made available electronically we must increase the Internet access to assist government employees in communicating with others. IG
154. I don't think the policy should necessarily be any different than it is now. The problem, as always, is implementation and application. I think Internet

access at work on government equipment should be limited to those sites and activities that have a reasonable relationship to one's work. But that does not mean we should access only those sites tied directly to a specific issue or problem. Being well-informed is always important so daily access to news sites is important too. II

Appendix H. Data Sheets

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Section I												
2	Level	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ
3	Rank	GS-12	GS-14	E-6	E-6	O-3	GS-3	O-4	GS-7	O-4	GS-15	GS-13	E-9
4	Yrs in job	19	15	1	1	3	2	1	2	2	1	1	3
5	Yrs in service	21	28	17	15	8	26	19	12	17	21	13	27
6	Section II												
7	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
8	Question 2	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
9	Question 3	no	no	no	no	yes	no	yes	yes	yes	no	no	yes
10	Question 3.5					no		yes	no	yes			yes
11	Question 4	yes	yes	yes	yes		yes	yes	yes	yes	yes	yes	yes
12	Question 5												
13	Question 6												
14	Section III												
15	Item 1	2	4	5	5	5	4	5	5	5	3	4	5
16	Item 2	4	2	5	5	4	3	3	4	4	5	4	5
17	Item 3	4	4	1	1	1	3	2	2	1	4	2	1
18	Item 4	4	4	5	3	5	4	4	3	5	2	4	5
19	Item 5	1	3	5	4	4	2	5	4	1	4	3	1
20	Item 6	4	3	5	5	4	4	2	2	5	2	2	5
21	Item 7	4	4	5	5	4	4	5	3	5	4	4	5
22	Item 8	4	4	5	5	5	4	5	4	5	4	4	5
23	Item 9	4	3	5	5	5	4	3	4	5	5	4	5
24	Item 10	4	5	1	1	2	2	1	2	1	2	2	1
25	Item 11	5	2	5	2	2	2	4	2	1	3	2	2
26	Item 12	3	3	5	4	4	3	3	3	3	4	3	2
27	Item 13	5	4	5	5	1	4	2	2	4	3	4	4
28	Item 14	4	5	5	5	5	4	4	3	5	4	4	5
29	Item 15	4	2	2	1	2	2	3	2	3	1	2	1
30	Item 16	4	4	5	4	4	4	4	3	5	3	4	5
31	Section IV												
32	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
33	Question 2	7	15	10	9	8	10	9	9	3	5	5	8
34	Question 3	1	1	1	1	1	1	1	1	1	1	1	1
35	Question 4	1	1	1	1	1	1	1	1	1	1	1	1
36	Question 5	5	6	4	3	4	4	5	5	4	5	5	4
37	Question 6	4	4	3	4	3	4	4	3	4	3	3	2
38	Question 7	6	5	6	5	3	3	5	4	5	6	5	4
39	Question 8	4	5	5	4	3	3	5	4	3	3	4	3
40	Question 9	4	4	5	3	2	4	4	3	4	4	5	4
41													
42	Notes: 1. Section II, Question 3.5 was only answered by those respondents who use a computer at home. Section II, Questions 5 and 6 were only answered by those respondents whose work computer does not have Internet access. 3. Shaded areas indicate the respondent left the item blank. 4. Section III, Item 10 is a reverse of Section III, Item 7. 5. Section III, Item 15 is a reverse of Section III, Item 2.												
43													
44													
45													
46													
47													
48													
49													
50													

	A	N	O	P	Q	R	S	T	U	V	W	X	Y
1	Section I												
2	Level	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ
3	Rank	GS-12	0-3	0-3	0-5	0-5	0-3	0-3	GS-13	GS-13	GS-15	GS-13	GS-6
4	Yrs in job	7	2	1	2	1	1	1	1	3	13	4	2
5	Yrs in service	25	7	6	19	23	11	7	22	30	24	21	13
6	Section II												
7	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
8	Question 2	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
9	Question 3	yes	yes	no	yes	yes	no	yes	yes	yes	yes	yes	no
10	Question 3.5	yes	yes		yes	yes		yes	yes	no	yes	no	
11	Question 4	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
12	Question 5												
13	Question 6												
14	Section III												
15	Item 1	5	4	3	4	3	5	5	5	4	2	4	2
16	Item 2	2	5	2	4	2	5	3	4	2	4	4	3
17	Item 3	1	5	4	2	4	2	1	1	2	3	2	2
18	Item 4	5	3	4	3	2	4	2	4	4	2	3	2
19	Item 5	5	4	1	4	1	3	3	3	2	1	3	2
20	Item 6	5	5	3	4	1	2	5	3	3	4	5	2
21	Item 7	5	5	4	4	3	4	5	5	4	4	5	3
22	Item 8	5	3	4	4	3	5	5	5	3	2	4	4
23	Item 9	3	4	4	4	5	5	3	4	4	3	4	3
24	Item 10	1	1	2	2	1	1	1	1	1	1	2	3
25	Item 11	5	1	3	2	3	2	2	2	4	4	2	4
26	Item 12	3	1	3	3	2	3	2	3	4	3	3	3
27	Item 13	1	1	5	2	4	2	3	4	4	5	4	5
28	Item 14	5	5	3	3	3	5	2	5	4	3	4	3
29	Item 15	4	1	3	2	3	2	4	1	2	3	3	3
30	Item 16	5	4	2	3	3	5	3	5	5	4	4	3
31	Section IV												
32	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
33	Question 2	3	12	44	17	29	12	8	6	6	23	12	30
34	Question 3	1	1	1	1	1	1	1	1	1	1	1	1
35	Question 4	1	1	1	1	1	1	1	1	1	1	1	1
36	Question 5	5	5	5	5	6	5	5	5	5	5	4	6
37	Question 6	3	5	6	6	5	4	4	4	3	5	4	6
38	Question 7	4	3	6	1	5	4	4	4	4	5	5	5
39	Question 8	2	2	3	3	4	5	1	4	4	3	3	4
40	Question 9	4	5	3	2	4	4	4	5	5	4	4	4
41	Notes: 1. Section II, Question 3.5 was only answered by those respondents who use a computer at home. Section II, Questions 5 and 6 were only answered by those respondents whose work computer does not have Internet access. 3. Shaded areas indicate the respondent left the item blank. 4. Section III, Item 10 is a reverse of Section III, Item 7. 5. Section III, Item 15 is a reverse of Section III, Item 2.												
42													
43													
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46													
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48													
49													
50													

	A	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK
1	Section I												
2	Level	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ
3	Rank	0-4	GS-12	GS-13	GS-13	0-4	0-4	0-5	GS-14	0-4	0-4	GS-15	E-9
4	Yrs in job	1	2	3	2	1		6	4	1	1	1	2
5	Yrs in service	15	41	14	12	12		17	26	12	15	24	25
6	Section II												
7	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
8	Question 2	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
9	Question 3	yes	yes	no	yes	yes	yes	yes	yes	yes	yes	yes	yes
10	Question 3.5	yes	yes		no	no	no	no	no	yes	yes	yes	yes
11	Question 4	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
12	Question 5												
13	Question 6												
14	Section III												
15	Item 1	5	3	5	4	5	4	4	5	5	4	4	5
16	Item 2	2	2	4	4	4	3		2	3	4	1	5
17	Item 3	2	3	2	2	2	2	2	2	2	3	3	1
18	Item 4	5	4	2	4	5	4	4	2	4	3	4	4
19	Item 5	4	4	3	2	4	2	2	3	4	2	1	2
20	Item 6	4	4	4	4	4	2	4	4	2	3	5	4
21	Item 7	5	4	4	4	4	4	4	3	4	4	5	5
22	Item 8	5	4	5	4	5	3	4	3	4	3	5	5
23	Item 9	5	4	3	4	5	4	3	3	3	4	2	5
24	Item 10	1	2	1	2	1	1	2	2	2	2	1	1
25	Item 11	3	2	2	2	3	1	2	1	2	4	2	3
26	Item 12	4	3	3	3	3	1	3	1	3	3	3	3
27	Item 13	4	3	4	4	2	5	4	3	3	4	2	3
28	Item 14	4	4	4	4	5	5	4	2	4	4	5	4
29	Item 15	4	3	3	2	2	2		4	3	2	5	5
30	Item 16	5	4	3	4	4	3	4	2	3	4	4	4
31	Section IV												
32	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
33	Question 2	8	12	10	7	4	7	10	12	20	8	5	6
34	Question 3	1	1	1	1	1	1	1	1	1	1	1	1
35	Question 4	1	1	1	1	1	1	1	1	1	1	1	1
36	Question 5	5	5	5	5	5	6	4	5	6	5	4	5
37	Question 6	3	5	5	3	4	5	4	6	4	3	1	3
38	Question 7	5	5	5	5	6	5	5	5	1	4	4	4
39	Question 8	5	4	1	4	2	2	3	3	4	3	1	4
40	Question 9	5	4	4	4	4	4	3	4	4	4	4	4
41													
42	Notes: 1. Section II, Question 3.5 was only answered by those respondents who use a computer at home. Section II, Questions 5 and 6 were only answered by those respondents whose work computer does not have Internet access. 3. Shaded areas indicate the respondent left the item blank. 4. Section III, Item 10 is a reverse of Section III, Item 7. 5. Section III, Item 15 is a reverse of Section III, Item 2.												
43													
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49													
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	A	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW
1	Section I												
2	Level	HQ	HQ	HQ	base	HQ	HQ	HQ	HQ	HQ	HQ	base	HQ
3	Rank	GS-15	0-4	GS-12	0-4	GS-13	GS-14	GS-13	GS-14	GS-12	0-4	0-3	GM-13
4	Yrs in job	2	3	3	2	2	9	2	4	3	1		4
5	Yrs in service	31	15	21	12	13	22	12	18	15	12		15
6	Section II												
7	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
8	Question 2	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
9	Question 3	yes	yes	yes	yes	yes	yes	yes	no	no	yes	yes	yes
10	Question 3.5	yes	no	no	no	no	yes	yes			yes	no	no
11	Question 4	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
12	Question 5												
13	Question 6												
14	Section III												
15	Item 1	5	5	4	4	5	4	4	4	3	4	4	4
16	Item 2	4	5	4	4	2	5	2	3	3	5	2	4
17	Item 3	2	3	4	2	2	2	2	2	2	2	2	3
18	Item 4	4	4	3	3	4	4	4	3	3	3	4	4
19	Item 5	2	2	2	4	2	2	1	1	3	4	2	4
20	Item 6	5	4	4	2	4	5	5	2	3	4	4	3
21	Item 7	5	5	5	3	4	4	4	4	3	4	4	4
22	Item 8	3	4	5	4	4	4	5	4	4	4	4	4
23	Item 9	3	5	4	3	3	5	4	4	3	5	4	3
24	Item 10	1	1	1	2	1	1	1	2	2	2	1	1
25	Item 11	4	3	5	2	3	3	4	2	1	1	2	3
26	Item 12	3	4	3	2	2	4	4	4	3	4	2	3
27	Item 13	3	4	4	2	4	4	3	5	4	3	5	4
28	Item 14	5	4	5	3	4	4	5	3	3	2	3	4
29	Item 15	3	1	3	3	3	1	3	2	3	1	2	2
30	Item 16	5	4	4	3	4	4	4	3	2	2	3	4
31	Section IV												
32	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
33	Question 2	10	11	6	9	6	14	17	9	3	12	6	5
34	Question 3	1	1	1	1	1	1	1	1	1	1	1	1
35	Question 4	1	1	1	1	1	1	1	1	1	1	1	1
36	Question 5	5	5	3	5	5	4	4	5	6	4	4	5
37	Question 6	3	3	1	4	4	3	4	6	6	6	6	3
38	Question 7	6	5	5	5	4	5	2	5	4	5	6	4
39	Question 8	5	3	4	2	2	4	4	4	4	4	2	3
40	Question 9	4	4	4	5	2	4	4	5		4	4	4
41													
42	Notes:												
43	1. Section II, Question 3.5 was only answered by those respondents who use a												
44	computer at home.												
45	Section II, Questions 5 and 6 were only answered by those respondents whose work												
46	computer does not have Internet access.												
47	3. Shaded areas indicate the respondent left the item blank.												
48	4. Section III, Item 10 is a reverse of Section III, Item 7.												
49	5. Section III, Item 15 is a reverse of Section III, Item 2.												
50													

	A	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI
1	Section I												
2	Level	HQ	HQ	HQ	HQ	HQ	HQ	base	HQ	HQ	HQ	HQ	HQ
3	Rank	0-3	GS-13	0-4	GS-14	GS-13	0-6	GS-11	0-5	GS-13	GS-12	GS-14	0-4
4	Yrs in job	2	3	4	4	1	1	2		5	1	4	1
5	Yrs in service	10	15	18	20	24	26	11	21	26	20	16	15
6	Section II												
7	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
8	Question 2	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
9	Question 3	yes	yes	yes	yes	yes	yes	no	yes	yes	yes	yes	no
10	Question 3.5		yes	yes	no	yes	yes		no	no	yes	no	
11	Question 4	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
12	Question 5												
13	Question 6												
14	Section III												
15	Item 1	5	4	5	5	4	1	4	4	4	3	2	4
16	Item 2	4	3	3	3	4	2	5	4	3	3	2	4
17	Item 3	2	3	2	2	2	5	4	2	3	4	3	2
18	Item 4	5	3	5	4	4	4	3	3	4	2	2	4
19	Item 5	2	2	5	2	2	3	4	2	3	2	1	2
20	Item 6	4	3	5	4	3	4	5	4	3	2	1	3
21	Item 7	5	4	5	4	4	5	5	4	3	3	1	4
22	Item 8	5	4	5	4	4	4	5	4	4	2	2	4
23	Item 9	4	3	5	2	4	3	5	4	4	3	3	4
24	Item 10	1	2	1	2	1	1	1	2	2	2	2	2
25	Item 11	2	2	5	2	3	2	3	2	4	2	2	2
26	Item 12	3	2	5	2	3	3	4	4	4	2	2	3
27	Item 13	4	3	1	4	4	4	3	4	4	4	4	4
28	Item 14	5	4	5	4	4	5	5	4	3	3	2	3
29	Item 15	2	3	3	3	1	4	2	2	2	3	3	2
30	Item 16	5	4	5	4	4	5	4	4	4	2	2	4
31	Section IV												
32	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
33	Question 2	3	7	7	6	9	6	4	12	3	5	4	8
34	Question 3	1	1	1	1	1	1	1	1	1	1	1	1
35	Question 4	1	1	1	1	1	1	1	1	1	1	1	1
36	Question 5	5	6	1	5	4	5	6	4	5	6	6	4
37	Question 6	3	4	3	5	4	1	4	4	4	6	6	4
38	Question 7	3	5	5	5	6	3	5	6	4	4	6	5
39	Question 8	4	4	2	4	4	3	1	4	4	3	3	4
40	Question 9	4	2	5	4	3	4	5	4	4	4		4
41													
42	Notes:												
43	1. Section II, Question 3.5 was only answered by those respondents who use a												
44	computer at home.												
45	Section II, Questions 5 and 6 were only answered by those respondents whose work												
46	computer does not have Internet access.												
47	3. Shaded areas indicate the respondent left the item blank.												
48	4. Section III, Item 10 is a reverse of Section III, Item 7.												
49	5. Section III, Item 15 is a reverse of Section III, Item 2.												
50													

	A	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU
1	Section I												
2	Level	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ
3	Rank	GS-13	GS-13		0-3	GS-14	E-7	0-4	0-4	GS-13	GS-12		GM-14
4	Yrs in job	10	4	4	1	4	3	1	1	3	4	1	
5	Yrs in service	28	15	25	8	24	21	13	18	25	8	22	
6	Section II												
7	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
8	Question 2	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
9	Question 3	no	yes	yes	no	yes	yes	yes	yes	yes	yes	yes	yes
10	Question 3.5		yes	no		no	yes	no	yes	no	no	yes	
11	Question 4	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
12	Question 5												
13	Question 6												
14	Section III												
15	Item 1	4	5	2	4	4	3	4	5	4	3	1	4
16	Item 2	4	3	2	3	2	3	1	4	4	3	1	5
17	Item 3	2	4	4	3	4	3	4	2	1	4	1	4
18	Item 4	4	4	3	3	4	4	4	5	4	2	4	4
19	Item 5	2	1	1	4	4	1	1	5	4	2	2	3
20	Item 6	4	4	1	4	4	3	4	4	5	2	1	5
21	Item 7	4	5	4	4	4	4	4	5	5	4	4	5
22	Item 8	4	4	3	4	5	4	4	5	5	3	4	4
23	Item 9	3	4	3	4	2	4	3	5	5	2	2	5
24	Item 10	1	2	2	1	2	2	1	1	1	2	3	2
25	Item 11	2	2	4	3	2	3	1	3	4	2	1	5
26	Item 12	2	4	2	3	2	2	2	3	4	3	3	5
27	Item 13	4	4	4	3	4	4	4	1	4	5	4	4
28	Item 14	4	4	1	4	4	3	4	5	4	4	1	5
29	Item 15	2	3	3	3	4	3	4	2	1	3	3	1
30	Item 16	4	4	2	4	4	4	4	4	4	4	4	5
31	Section IV												
32	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
33	Question 2	9	25	43	8	10	3	1	7	5	21	35	10
34	Question 3	1	1	1	1	1	1	1	1	1	1	1	1
35	Question 4	1	1	1	1	1	1	1	1	1	1	1	1
36	Question 5	6	6	6	6	4	5	6	4	4	4	6	3
37	Question 6	4	3	6	5	4	4	5	4	3	4	6	3
38	Question 7	4	6	6	6	5	5	4	4	5	6	5	2
39	Question 8	4	2	3	1	4	4	3	2	4	2	2	4
40	Question 9	4	4	4	6	3	3	2	2	4	4	4	4
41													
42	Notes:	<p>1. Section II, Question 3.5 was only answered by those respondents who use a computer at home.</p> <p>Section II, Questions 5 and 6 were only answered by those respondents whose work computer does not have Internet access.</p> <p>3. Shaded areas indicate the respondent left the item blank.</p> <p>4. Section III, Item 10 is a reverse of Section III, Item 7.</p> <p>5. Section III, Item 15 is a reverse of Section III, Item 2.</p>											
43													
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48													
49													
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	A	BV	BW	BX	BY	BZ	CA	CB	CC	CD	CE	CF	CG
1	Section I												
2	Level	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ
3	Rank		0-3	GS-6	0-3		12	GM-13	GS-12	GS-7	GS-13	0-4	0-5
4	Yrs in job		2	3	1		3	2	2	2	8	3	1
5	Yrs in service		11	16	10		22	17	16	21	23	14	17
6	Section II												
7	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
8	Question 2	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
9	Question 3	yes	yes	yes	yes	yes	no	yes	no	no	no	yes	yes
10	Question 3.5		no	yes	yes	yes		no					no
11	Question 4	yes	yes	yes	yes		yes	yes	yes	yes	yes	yes	yes
12	Question 5												
13	Question 6												
14	Section III												
15	Item 1	4	5	5	3	5	4	3	1	5	3	5	4
16	Item 2	4	4	5	2	3		3	1	5	3	5	4
17	Item 3	3	2	1	3	2	3	2	1	2	2	1	4
18	Item 4	4	4	5	3	4	3	3	1	4	1	5	4
19	Item 5	2	4	5	2	2	3	1	1	2	1	1	2
20	Item 6	4	3	5	2	3	5	2	1	3	1	5	5
21	Item 7	4	4	5	4	1	5	4	1	3	1	5	5
22	Item 8	4	4	5	3	4	5	3	1	4	1	5	4
23	Item 9	4	4	5	3	3	5	2	1	5	3	2	4
24	Item 10	2	2	1	2	2	1	2	1	1	3	1	1
25	Item 11	2	2	4	1	1	5	1	1	4	3	4	5
26	Item 12	3	3	1	2	1	3	2	1	2	2	2	4
27	Item 13	4	4	2	4	4	4	4	1	4	2	2	4
28	Item 14	4	4	5	3	2	4	4	1	4	2	5	4
29	Item 15	3	2	1	4	3		3	5	1	3	3	1
30	Item 16	4	4	3	3	3	4	3	1	4	2	5	4
31	Section IV												
32	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
33	Question 2	8	80	5	110	35	5	9	9	3	5	5	15
34	Question 3	1	1	1	1	1	1	1	1	1	1	1	1
35	Question 4	1	1	1	1	1	1	1	1	5	1	1	1
36	Question 5	5	6	3	5	5	4	6	6	6	6	4	4
37	Question 6	3	4	2	5	6	4	5	6	4	6	2	3
38	Question 7	3	5	4	5	5	4	6	6	5	6	4	5
39	Question 8	3	1	5	3	2	4	5	2	5	3	2	4
40	Question 9	3	4	4	4		5	3	4	4	2	4	4
41													
42	Notes:												
43	1. Section II, Question 3.5 was only answered by those respondents who use a												
44	computer at home.												
45	Section II, Questions 5 and 6 were only answered by those respondents whose work												
46	computer does not have Internet access.												
47	3. Shaded areas indicate the respondent left the item blank.												
48	4. Section III, Item 10 is a reverse of Section III, Item 7..												
49	5. Section III, Item 15 is a reverse of Section III, Item 2.												
50													

	A	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR	CS
1	Section I												
2	Level	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ
3	Rank	GS-13	GS-14	GS-12	0-6	GS-13		GS-15	GS-12	GS-7		GS-11	GS-12
4	Yrs in job	7	10	1	1	12		3	1	3	9	6	2
5	Yrs in service	25	25	12	25	24		8	13	15	18	16	13
6	Section II												
7	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
8	Question 2	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
9	Question 3	yes	yes	yes	yes	yes	yes	no	yes	yes	yes	yes	yes
10	Question 3.5	yes	no		yes	no	yes		no	no			yes
11	Question 4	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
12	Question 5												
13	Question 6												
14	Section III												
15	Item 1	5	4	4	3	4	5	2	4	3	4	3	4
16	Item 2	2	3	4	2	1	5	3	4	4	4	3	2
17	Item 3	2	4	2	2	1		3	3	4	4	4	2
18	Item 4	4	4	4	2	3	5	4	5	4	2	4	4
19	Item 5	2	2	2	2	1	5	1	2	1	3	2	2
20	Item 6	1	4	4	2	1	5	4	3	2	4	3	4
21	Item 7	3	4	4	2	4	5	5	5	4	3	4	4
22	Item 8	4	4	4	2	3	5	4	5	2	4	4	4
23	Item 9	2	3	4	3	3	5	3	4	5	4	3	3
24	Item 10	2	3	2	2	1	1	2	1	1	2	2	1
25	Item 11	2	4	2	2	2	5	2	4	2	3	2	2
26	Item 12	2	3	2	2	2	2	3	4	5	2	2	3
27	Item 13	3	4	4	2	4	1	4	4	5	5	5	4
28	Item 14	3	3	4	2	4	5	4	5	3	3	4	4
29	Item 15	4	3	2	3	4	1	2	2	1	3	3	4
30	Item 16	3	3	4	2	3	3	4	4	2	3	4	4
31	Section IV												
32	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
33	Question 2	12	100	12	6	16	5	6	7	3	12	7	10
34	Question 3	1	1	1	1	1	1	1	1	1	1	1	1
35	Question 4	1	1	1	1	1	1	1	1	1	1	1	1
36	Question 5	6	5	5	6	6	4	5	5	6	4	6	5
37	Question 6	5	6	4	5	5	3	3	3	6	6	5	3
38	Question 7	4	4	5	5	4	1	6	5	6	5	6	5
39	Question 8	2		3	3	3	3	2	3	5	3	2	1
40	Question 9	4		5	4	3	4	4	4	4	2	4	4
41													
42	Notes:												
43	1. Section II, Question 3.5 was only answered by those respondents who use a												
44	computer at home.												
45	Section II, Questions 5 and 6 were only answered by those respondents whose work												
46	computer does not have Internet access.												
47	3. Shaded areas indicate the respondent left the item blank.												
48	4. Section III, Item 10 is a reverse of Section III, Item 7.												
49	5. Section III, Item 15 is a reverse of Section III, Item 2.												
50													

	A	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE
1	Section I												
2	Level	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ
3	Rank	E-6		GS-12	0-3	GS-13	GS-12	GS-5	GS-15	0-3	GM-13	E-8	E-7
4	Yrs in job	1	8	4	1	6	11	1	2	2	3	2	1
5	Yrs in service	16	25	14	9	20	29	12	32	8	23	22	17
6	Section II												
7	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
8	Question 2	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
9	Question 3	no	yes	no	yes	no	no	no	yes	yes	no	yes	no
10	Question 3.5								yes	yes			
11	Question 4	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
12	Question 5												
13	Question 6												
14	Section III												
15	Item 1	4	4	3	5	4	4	4	1	4	2	2	3
16	Item 2	2	4	2	2	2	4	2	2	4	2		1
17	Item 3	5	2	3	4	2	4	4	4	2	2	4	5
18	Item 4	2	4	2	3	4	3	5	2	5	2	2	2
19	Item 5	2	3	1	4	2	3	2	1	2	2	2	5
20	Item 6	1	5	1	3	2	2	4	2	4	2	4	3
21	Item 7	4	3	2	4	3	4	4	4	4	2	2	1
22	Item 8	5	4	3	4	3	4	4	4	3	3	2	3
23	Item 9	3	4	3	3	2	3	4	3	3	3	3	3
24	Item 10	2	2	3	2	2	1	2	2	2	2	2	2
25	Item 11	2	3	1	2	2	3	2	2	2	2	2	3
26	Item 12	2	3	3	2	2	2	2	4	2	2	2	3
27	Item 13	5	4	3	2	4	3	3	5	4	4	3	5
28	Item 14	4	3	2	4	3	4	2	4	4	2	3	3
29	Item 15	2	2	3	4	4	2	3	3	3	3		3
30	Item 16	4	4	2	3	3	4	3	4	4	2	3	1
31	Section IV												
32	Question 1	yes	yes	yes	yes	yes	no	yes	yes	yes	yes	yes	yes
33	Question 2	4	11	38	6	8	6	50	36		7	6	2
34	Question 3	1	1	1	1	1	1	1	1	1	1	1	1
35	Question 4	1	1	1	1	1	1	2	1	1	1	1	3
36	Question 5	6	4	6	5	4	6	6	6	5	6	5	6
37	Question 6	4	3	6	4	3	6	4	5	4	6	4	6
38	Question 7	6	2	6	5	5	6	6	5	5	6	5	6
39	Question 8	2	2	4	3	3	3	2	3		3	3	3
40	Question 9	4	5	4	3	3	5	4	4	4	2	2	3
41													
42	Notes:												
43	1. Section II, Question 3.5 was only answered by those respondents who use a												
44	computer at home.												
45	Section II, Questions 5 and 6 were only answered by those respondents whose work												
46	computer does not have Internet access.												
47	3. Shaded areas indicate the respondent left the item blank.												
48	4. Section III, Item 10 is a reverse of Section III, Item 7.												
49	5. Section III, Item 15 is a reverse of Section III, Item 2.												
50													

	A	DF	DG	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ
1	Section I												
2	Level	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ
3	Rank	GS-13	GS-13	0-5	GS-13	0-4	0-4	E-5	GS-13	GS-12	E-7	0-6	E-7
4	Yrs in job	13	14	2	15	1	1	2	4	2	1	1	2
5	Yrs in service	30	25	18	28	13	20	13	29	16	19	24	12
6	Section II												
7	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
8	Question 2	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
9	Question 3	no	yes	no	yes	yes	yes	no	3	yes	yes	yes	yes
10	Question 3.5				yes	no				yes	no	yes	yes
11	Question 4	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
12	Question 5												
13	Question 6												
14	Section III												
15	Item 1	5	5	4	3	4	5	4	2	5	4	3	1
16	Item 2	3	3	1	3	1	3	4		5	4	2	
17	Item 3	3	2	2	5	5	2	3	4	4	2	2	1
18	Item 4	4	5	4	3	4	5	4	2	4	4	2	1
19	Item 5	2	2	2	3	1	3	4	2	5	1	1	1
20	Item 6	3	5	4	2	5	4	3	2	5	2	4	1
21	Item 7	3	5	4	3	5	4	2	2	5	4	3	1
22	Item 8	3	5	4	3	4	5	4	2	5	4	4	1
23	Item 9	4	3	2	3	2	3	4	2	5	4	4	1
24	Item 10	3	1	2	3	2	1	2		5	1	3	1
25	Item 11	2	1	2	3	4	2	2	2	5	2	2	1
26	Item 12	3	2	1	3	2	3	3	2	5	2	4	1
27	Item 13	3	1	4	3	4	3	3	3	4	5	5	1
28	Item 14	3	5	2	2	4	4	2	3	5	4	2	1
29	Item 15	3	3	5	3	4	3	2		1	2	3	
30	Item 16	3	5	2	2	5	4	2	3	5	4	2	1
31	Section IV												
32	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
33	Question 2	160	20	6	9	6	30	10	12	40	5	7	10
34	Question 3	1	1	1	2	1	1	1	1	1	1	1	1
35	Question 4	1	1	1	2	1	1	1	1	1	1	1	1
36	Question 5	6	5	5	6	4	5	6	6	1	6	6	6
37	Question 6	5	5	4	6	4	4	6	6	1	5	6	6
38	Question 7	6	4	5	4	6	5	5	6	1	5	6	6
39	Question 8	4	4	3	4	1	3	3	3	1	2	3	5
40	Question 9	3	4	2	5	5	4	4	4	5	4	4	2
41													
42	Notes:												
43	1. Section II, Question 3.5 was only answered by those respondents who use a												
44	computer at home.												
45	Section II, Questions 5 and 6 were only answered by those respondents whose work												
46	computer does not have Internet access.												
47	3. Shaded areas indicate the respondent left the item blank.												
48	4. Section III, Item 10 is a reverse of Section III, Item 7.												
49	5. Section III, Item 15 is a reverse of Section III, Item 2.												
50													

	A	DR	DS	DT	DU	DV	DW	DX	DY	DZ	EA	EB	EC
1	Section I												
2	Level	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ
3	Rank	0-4	GS-12	0-3	0-5	0-5	gs-13	0-2	0-4	GM-14	0-4	E-8	GS-9
4	Yrs in job	1		2	1	2	25	1	2	4	1	4	8
5	Yrs in service	13	11	8	22	18	39	4	24	24	14	19	12
6	Section II												
7	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	no
8	Question 2	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
9	Question 3	yes	no	yes	yes	no	yes	yes	yes	no	yes	yes	no
10	Question 3.5	no		yes	yes		no		yes				
11	Question 4	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
12	Question 5												
13	Question 6												
14	Section III												
15	Item 1	4	4	5	4	5	1	5	5	4	5	3	2
16	Item 2	2	4	3	4	5	4	5	4	2	2	3	1
17	Item 3	4	5	1	1	3	1	1	1	2	4	4	4
18	Item 4	4	4	5	3	3	4	5	3	3	4	2	1
19	Item 5	2	3	2	3	4	1	2	5	2	2	2	1
20	Item 6	3	5	5	4	5	4	5	5	3	4	2	1
21	Item 7	5	4	5	4	4	4	5	5	4	5	4	1
22	Item 8	4	5	5	3	4	2	5	5	2	4	4	1
23	Item 9	1	4	4	4	4	1	5	5	3	4	3	1
24	Item 10	1	1	1	1	1	1	1	1	2	1	1	1
25	Item 11	3	2	5	3	3	3	4	4	2	4	3	1
26	Item 12	3	2	3	3	3	2	3	4	2	3	4	1
27	Item 13	4	2	5	4	2	5	2	1	3	4	5	1
28	Item 14	4	4	5	4	4	5	5	5	2	5	4	1
29	Item 15	4	2	3	1	2	2	1	2	4	4	3	5
30	Item 16	3	4	5	4	4	5	5	5	4	4	4	1
31	Section IV												
32	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
33	Question 2	4	16	5	7	25	18	35	50	25	5	3	12
34	Question 3	1	1	1	1	1	1	1	1	1	1	1	1
35	Question 4	1	1	1	1	1	1	1	1	1	1	1	1
36	Question 5	4	5	4	5	4	5	5	4	5	4	6	6
37	Question 6	4	4	3	4	4	6	3	3	6	3	5	6
38	Question 7	5	6	5	5	4	6	3	1	6	6	6	3
39	Question 8	3	4	4	1	4	5	5	4	3	5	3	3
40	Question 9	4	4	4	4	4	4	2	4	3	4	5	2
41													
42	Notes:												
43	1. Section II, Question 3.5 was only answered by those respondents who use a												
44	computer at home.												
45	Section II, Questions 5 and 6 were only answered by those respondents whose work												
46	computer does not have Internet access.												
47	3. Shaded areas indicate the respondent left the item blank.												
48	4. Section III, Item 10 is a reverse of Section III, Item 7.												
49	5. Section III, Item 15 is a reverse of Section III, Item 2.												
50													

	A	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO
1	Section I												
2	Level	base	base	base	base	HQ	HQ	HQ	HQ	HQ	HQ	HQ	HQ
3	Rank	E-7	GS-9	GS-5	E-6	GS-13	0-4	0-3	GS-12	GS-13	GS-13	GS-12	GS-14
4	Yrs in job		3	3	1	9	2	1	3	4	1	13	5
5	Yrs in service	13	15	14	14	30	13	6	34	18	17	15	30
6	Section II												
7	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
8	Question 2	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
9	Question 3	yes		yes	yes	no	yes	yes	yes	yes	yes	yes	no
10	Question 3.5	no			yes		yes	yes	yes	no	yes	yes	
11	Question 4	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
12	Question 5												
13	Question 6												
14	Section III												
15	Item 1	5	1	4	5	4	5	4	4	5	4	5	4
16	Item 2	3	3	3	3	3	3	3	4	4	3	5	3
17	Item 3	2		2	2	4	2	4	3	2	1	4	5
18	Item 4	5	3	4	4	3	4	4	4	2	2	4	5
19	Item 5	5	1	3	2	4	2	4	4	2	2	4	2
20	Item 6	5	1	2	2	4	4	4	4	4	1	4	4
21	Item 7	5	3	4	4	4	5	4	4	3	2	4	5
22	Item 8	5	3	4	4	4	5	5	4	4	3	4	5
23	Item 9	4		4	4	3	4	3	4	5	4	4	5
24	Item 10	1		2	2	2	1	1	2	3	2	4	1
25	Item 11	3		2	1	2	4	2	1	4	1	3	5
26	Item 12	1		3	2	3	3	2	3	3	2	3	4
27	Item 13	2	5	4	4	4	2	4	4	4	2	4	5
28	Item 14	4		3	3	4	4	4	4	2	2	4	5
29	Item 15	4		3	2	3	3	3	1	1	2	1	3
30	Item 16	4		3	3	4	4	4	4	2	2	4	5
31	Section IV												
32	Question 1	no	no	yes	no	yes	yes	yes	yes	yes	yes	yes	yes
33	Question 2	12	10	11	3	100	35	9	16	6	6	15	7
34	Question 3	1	1	1	1	1	1	1	1	1	1	1	1
35	Question 4	1	1	1	1	1	1	1	1	1	1	1	1
36	Question 5	4	6	6	4	4	5	5	5	4	6	4	4
37	Question 6	4			3	3	3	3	4	6	6	4	3
38	Question 7	6	6	5	4	5	4	5	5	5	4	4	6
39	Question 8	2		2	4	2	4	3	4	4	4	2	1
40	Question 9	4		4	4	5	4	3	4	4	2	5	4
41													
42	Notes:												
43	1. Section II, Question 3.5 was only answered by those respondents who use a												
44	computer at home.												
45	Section II, Questions 5 and 6 were only answered by those respondents whose work												
46	computer does not have Internet access.												
47	3. Shaded areas indicate the respondent left the item blank.												
48	4. Section III, Item 10 is a reverse of Section III, Item 7.												
49	5. Section III, Item 15 is a reverse of Section III, Item 2.												
50													

	A	EP	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ	FA
1	Section I												
2	Level	HQ	HQ	base	base	base	base	base	base	base	base	base	base
3	Rank	GM-15	GM-14	E-7	O-5			0-3	gs-9	SrA	E-5	O-3	
4	Yrs in job	1	2	1	2		2	1	2	7	1	1	
5	Yrs in service	25	19	21	22		11	13	10	7	8	10	
6	Section II												
7	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
8	Question 2	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
9	Question 3	yes	yes	yes	yes	no	no	yes	yes	no	yes	yes	no
10	Question 3.5	no	yes	yes	no			no	yes		yes	no	yes
11	Question 4	yes	yes	yes	yes	yes	yes	yes	no	yes	yes	yes	yes
12	Question 5								yes				
13	Question 6								no				
14	Section III												
15	Item 1	3	5	5	5	4	2	4		3	5	2	3
16	Item 2	4	5	2	4	4	3	5		4	2	3	2
17	Item 3	2	5	1	2	2	1	2		2	3	4	4
18	Item 4	4	4	5	4	4	1	3		3	3	2	3
19	Item 5	2	5	3	4	2	1	2		1	2	1	1
20	Item 6	2	4	5	3	2	1	2		2	2	2	2
21	Item 7	3	4	5	4	4	3	2		2	2	2	1
22	Item 8	3	4	5	4	4	3	2		3	3	3	4
23	Item 9	4	4	5	4	3	3	4		3	4	3	4
24	Item 10	3	1	2	1	2	3	2		2	2	2	2
25	Item 11	4	2	3	3	2	3	2		2	2	5	1
26	Item 12	2	4	3	3	2	3	2		1	2	1	2
27	Item 13	4	1	4	3	4	5	4		5	4	1	5
28	Item 14	2	4	4	3	2	3	2		2	2	3	3
29	Item 15	2	2	3	2	3	3	2		1	4	3	4
30	Item 16	3	4	4	4	2	3	2		2	2	2	3
31	Section IV												
32	Question 1	yes	yes	yes	yes	yes	yes	yes		yes	no	yes	yes
33	Question 2	80	6	3	15	6	3	40		3	6	6	6
34	Question 3	1	1	1	1	1	1	2		1	1	1	1
35	Question 4	1	1	1	4	1	1	3		1	2	1	1
36	Question 5	6	6	4	5	4	6	5		6	6	6	5
37	Question 6	6	5	3	6	4		6		6	6	6	3
38	Question 7	6	1	1	6	6		6		6	4	6	6
39	Question 8	3	4	4	4	3	3	4		2	3	3	1
40	Question 9	4	4	2	4	5		4		4	5	3	5
41													
42	Notes:												
43	1. Section II, Question 3.5 was only answered by those respondents who use a												
44	computer at home.												
45	Section II, Questions 5 and 6 were only answered by those respondents whose work												
46	computer does not have Internet access.												
47	3. Shaded areas indicate the respondent left the item blank.												
48	4. Section III, Item 10 is a reverse of Section III, Item 7.												
49	5. Section III, Item 15 is a reverse of Section III, Item 2.												
50													

	A	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN
1	Section I													
2	Level	base	base	base	base	base	base	base	base	base	base	base	base	base
3	Rank		e-2	e-3	gs-4	NAF1	gs-9	o-6	SrA	E-7		E-7	0-3	0-3
4	Yrs in job		1	3	1	1	4	2	3	2		2	1	1
5	Yrs in service		1	3	9	12	14	25	8	18		10	5	20
6	Section II													
7	Question 1	yes	yes	yes	yes	yes	no	yes	yes	yes	yes	yes	yes	yes
8	Question 2	yes	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
9	Question 3	no	no	no	yes	no	no	no	yes	yes	no	no	yes	yes
10	Question 3.5								yes	yes				no
11	Question 4	yes	yes	yes	yes	no	no	yes	yes	yes	yes	no	no	no
12	Question 5					no		yes				no	yes	
13	Question 6					no		no				yes	no	
14	Section III													
15	Item 1	2	3	3	4		3	1	5	4	4			
16	Item 2	1	4	1	1		1	1	1	3	5			
17	Item 3	1	3	3	1		1	1	2	2	3			
18	Item 4	1	3	3	1		1	1	5	2	4			
19	Item 5	1	2	2	3		1	1	5	2	4			
20	Item 6	1	2	5	1		1	1	5	2	3			
21	Item 7	1	3	1	1		1	1	5	4	4			
22	Item 8	1	3	3	1		3	1	5	4	5			
23	Item 9	1	4	3			1	2	2	3	5			
24	Item 10	1	2	3			3	1	1	2	1			
25	Item 11	3	3	3			1	1	2	2	2			
26	Item 12	1	3	3			2	1	2	2	3			
27	Item 13	3	4	3			3	4	2	4	4			
28	Item 14	2	3	3			1	1	5	2	4			
29	Item 15	4	3	3			4	5	5	3	1			
30	Item 16		3	3			1	1	5	4	4			
31	Section IV													
32	Question 1	no		yes	no		no	yes	no	no	yes			
33	Question 2	6	3	4	12		3	5	5	3	5			
34	Question 3	1	1	2	1		1	1	1	1	1			
35	Question 4	1		2	5		5	4	1	1	3			
36	Question 5	6		6	5		4	6	4	4	6			
37	Question 6			6	6		6	6	4	6	4			
38	Question 7	6		6	6		6	6	6	6	6			
39	Question 8	5	3	3			3	4	3	1	2			
40	Question 9		4				4	4	5	4	5			
41														
42	Notes:													
43	1. Section II, Question 3.5 was only answered by those respondents who use a													
44	computer at home.													
45	Section II, Questions 5 and 6 were only answered by those respondents whose work													
46	computer does not have Internet access.													
47	3. Shaded areas indicate the respondent left the item blank.													
48	4. Section III, Item 10 is a reverse of Section III, Item 7.													
49	5. Section III, Item 15 is a reverse of Section III, Item 2.													
50														

	A	FO	FP	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA
1	Section I													
2	Level	base	base	base	base	base	base	base	base	base	base	base	base	base
3	Rank	0-3			E-7	E-7		E-7	E-7	E-7	E-5		E-6	SrA
4	Yrs in job	1			3			8	1	1	2		4	2
5	Yrs in service	17			18	20		22	18	17	12		18	4
6	Section II													
7	Question 1	yes	yes	yes	yes	yes	no	yes	yes	yes	yes	yes	yes	yes
8	Question 2	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
9	Question 3	yes	yes	yes	yes	yes	yes	yes	no	yes	no	yes	no	no
10	Question 3.5			no	yes		yes	yes				no		
11	Question 4	yes	no	no	no	no	no	no	no	no	no	no	yes	no
12	Question 5		yes	yes	yes	no	no	no	no	yes	no	yes		yes
13	Question 6		no	no	yes	no	no	yes	yes	no		yes		yes
14	Section III													
15	Item 1	5								5			5	4
16	Item 2	1								1			5	5
17	Item 3	1								1			4	4
18	Item 4	5								3			4	3
19	Item 5	5								5			5	3
20	Item 6	4								1			4	2
21	Item 7	4								2			5	3
22	Item 8	4								3			5	4
23	Item 9	2								3			5	5
24	Item 10	1								1			1	2
25	Item 11	2								1			3	2
26	Item 12	2								3			4	2
27	Item 13	2								2			4	3
28	Item 14	4								3			5	3
29	Item 15	5								3			1	2
30	Item 16	4								3			5	3
31	Section IV													
32	Question 1	no								no			yes	yes
33	Question 2	10								5			6	3
34	Question 3	1								1			1	1
35	Question 4	5								5			4	3
36	Question 5	6								5			5	6
37	Question 6	4								5			4	4
38	Question 7	2								5			6	6
39	Question 8									3			2	4
40	Question 9									4			5	3
41														
42	Notes:													
43	1. Section II, Question 3.5 was only answered by those respondents who use a													
44	computer at home.													
45	Section II, Questions 5 and 6 were only answered by those respondents whose work													
46	computer does not have Internet access.													
47	3. Shaded areas indicate the respondent left the item blank.													
48	4. Section III, Item 10 is a reverse of Section III, Item 7.													
49	5. Section III, Item 15 is a reverse of Section III, Item 2.													
50														

	A	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN
1	Section I													
2	Level	base	base	base	base	base	base	base	base	base	base	base	base	base
3	Rank	G-12	E-5		SrA	E-6	E-6	E-5	gs-4	E-5	0-4	E-5	E-7	E-7
4	Yrs in job	2	2		4	2	4	4	2	1	1	2	6	1
5	Yrs in service	21	13		4	19	17	10	10	12	17	12	21	20
6	Section II													
7	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
8	Question 2	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
9	Question 3	yes	yes	no	no	yes	yes	yes	yes	yes	yes	yes	yes	yes
10	Question 3.5		yes			yes		yes	no	yes	yes	yes	yes	
11	Question 4	yes	no	no	no	yes	no	no	no	yes	yes	no	no	no
12	Question 5		yes	no	yes		no	no	no			yes	yes	yes
13	Question 6		yes	yes	no		yes	yes	no			yes	yes	no
14	Section III													
15	Item 1	5	3			5				4	4			1
16	Item 2	2	2			5				1	2			1
17	Item 3	2	1			2				4	1			1
18	Item 4	5	2			5				4	1			1
19	Item 5	5	1			3				4	1			1
20	Item 6	5	1			5				4	1			1
21	Item 7	5	1			4				4	1			1
22	Item 8	5	1			5				5	1			1
23	Item 9	4	3			4				2				1
24	Item 10	1	1			2				1				1
25	Item 11	3	1			2				2				1
26	Item 12	4	1			4				2				1
27	Item 13	2	1			4				3				5
28	Item 14	5	3			4				4				3
29	Item 15	4	5			2				5				5
30	Item 16	4	3			4				4				3
31	Section IV													
32	Question 1	yes	no			yes				no	yes			no
33	Question 2	2	4			5				5	10			1
34	Question 3	1	1			1				1	1			1
35	Question 4	3	5			2				4	5			5
36	Question 5	4	6			4				6	6			6
37	Question 6	3	6			3				5	5			6
38	Question 7	5	5			5				2	6			6
39	Question 8	4	2			3				1				1
40	Question 9	5	4			4				5				4
41														
42	Notes:													
43	1. Section II, Question 3.5 was only answered by those respondents who use a													
44	computer at home.													
45	Section II, Questions 5 and 6 were only answered by those respondents whose work													
46	computer does not have Internet access.													
47	3. Shaded areas indicate the respondent left the item blank.													
48	4. Section III, Item 10 is a reverse of Section III, Item 7.													
49	5. Section III, Item 15 is a reverse of Section III, Item 2.													
50														

	A	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GZ	HA
1	Section I													
2	Level	base	base	base	base	base	base	base	base	base	base	base	base	base
3	Rank	E-7	E-6		E-6	E-7	E-6	E-7	E-7		0-3	GS-9		E-7
4	Yrs in job	3	2		3	4	8	3	5		2	3		2
5	Yrs in service	18	12		14	13	12	17	15		16	33		19
6	Section II													
7	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
8	Question 2	yes	yes	yes	no	yes	yes	yes	yes	no	yes	yes	yes	yes
9	Question 3	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
10	Question 3.5				yes		yes	yes	yes	yes	yes			yes
11	Question 4	yes	yes	no		yes	yes	yes	yes	yes	yes	yes	yes	yes
12	Question 5			yes								yes		
13	Question 6			yes								no		
14	Section III													
15	Item 1	5	4	3	5	4	5	4	5	2	4	3	4	4
16	Item 2	1	4	4	4	3	3	3	3	2	2	1	3	3
17	Item 3	3	4	3	2	3	3	1	1	2	2	1	4	3
18	Item 4	5	4	3	4	4	5	4	5	4	2	1	4	4
19	Item 5	5	1	2	5	3	5	3	5	1	2	1	2	3
20	Item 6	4	4	2	4	2	5	3	4	2	2	1	2	4
21	Item 7	5	4	2	4	4	5	4	5	4	2	1	4	5
22	Item 8	5	5	3	4	4	5	5	5	4	3	1	4	5
23	Item 9	3	5	4	5	4	3	5	5	4	3	3	4	3
24	Item 10	1	1	1	1	2	1	1	1	2	2	2	2	2
25	Item 11	1	3	5	2	2	5	2	2	2	2	1	2	3
26	Item 12	1	4	3	4	2	3	2	5	2	3	1	4	3
27	Item 13	1	5	5	2	4	1	3	4	5	4	1	4	4
28	Item 14	5	5	3	4	4	5	4	5	4	2	1	4	4
29	Item 15	5	4	1	2	2	2	2	3	4	4	4		3
30	Item 16	5	5	3	4	4	5	4	5	3	2	1	4	4
31	Section IV													
32	Question 1	no	yes	yes	yes	yes	yes	yes	yes	no	yes	yes	yes	yes
33	Question 2	17	3	10	4	5	6	18	7	5	10	7	5	5
34	Question 3	1	1	1	3	4	4	3	3	3	1	1	1	1
35	Question 4	5	3	5	3	4	1	3	5	3	2	2	4	1
36	Question 5	5	4	6	5	6	4	5	5	6	6	6	6	4
37	Question 6	6	2	6	3	4	2	3	3	5	6	6	4	3
38	Question 7	5	4	6	6	6	3	5	2	6	5	6	5	4
39	Question 8	3	3	3	2	2	2	4	5	2	1	3	3	3
40	Question 9	4	5	3	5	5	5	3	5	3	5	3	4	4
41														
42	Notes:													
43	1. Section II, Question 3.5 was only answered by those respondents who use a													
44	computer at home.													
45	Section II, Questions 5 and 6 were only answered by those respondents whose work													
46	computer does not have Internet access.													
47	3. Shaded areas indicate the respondent left the item blank.													
48	4. Section III, Item 10 is a reverse of Section III, Item 7.													
49	5. Section III, Item 15 is a reverse of Section III, Item 2.													
50														

	A	HB	HC	HD	HE	HF	HG	HH	HI	HJ	HK	HL	HM	HN
1	Section I													
2	Level	base	base	base	base	base	base	base	base	base	base	base	base	base
3	Rank	E-6	E-7	E-6	E-5				E-4	E-5	GS-5	E-4	O-4	O-3
4	Yrs in job	3	3	4	5			2	1	1	8	2	1	1
5	Yrs in service	15	15	15	12			13	5	14	32	5	13	16
6	Section II													
7	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
8	Question 2	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
9	Question 3	yes	yes	yes	yes	yes	no	yes	yes	no	yes	yes	yes	no
10	Question 3.5		yes	yes	yes				yes				yes	
11	Question 4	yes	yes	yes	yes	yes	yes	yes	yes	yes	no	no	yes	yes
12	Question 5						yes				yes	yes		
13	Question 6						no				yes	yes		
14	Section III													
15	Item 1	5	5		5	4	3	4	4	3	3	5	5	1
16	Item 2	4	4		1	1	3	3	3	2	3	1	3	4
17	Item 3	4	1		3	2	2	2	3	2	3	1	4	1
18	Item 4	5	5		4	3	2	4	2	2	1	1	4	1
19	Item 5	4	5		1	1	2	4	2	2	1	2	4	1
20	Item 6	2	4		3	3	2	2	1	2	1	1	4	1
21	Item 7	5	5		5	3	2	2	1	3	1	1	4	1
22	Item 8	4	5		5	3	3	5	4	3	1	1	4	1
23	Item 9	5	4	4	3	1	3	5	4		1	4	4	1
24	Item 10	1	1	2	1	5	2	1	1			1	1	1
25	Item 11	2	2	2	2	3	2	1	1			1	3	1
26	Item 12	4	4	2	3	2	2	3	3			1	4	1
27	Item 13	2	2	3	4	4	2	2	5	4		5	2	3
28	Item 14	5	4	4	5	4	2	2	2			1	5	3
29	Item 15	3	2	2	5	4	3	2	3			5	3	2
30	Item 16	4	4	3	4	4	2	2	3			1	5	1
31	Section IV													
32	Question 1	yes	yes	no	yes	yes	yes	yes	yes	yes	yes	yes	no	yes
33	Question 2	52	3	12	20	7	8	6	6	6	0	15	10	11
34	Question 3	3	1	1	3	2	1	1	1	1	1	1	1	1
35	Question 4	4	1	3	5	2	1	3	3	4	1	3	3	3
36	Question 5	5	5	4	4	5	6	5	6	6	6	6	6	6
37	Question 6	1	4	4		4	6	6	6	6	6	6	4	6
38	Question 7	6	4	4	4	6	6	4	3	6	6	5	5	6
39	Question 8	4	4	2	3	5	3	2	2			2	2	2
40	Question 9	4	5	4	4	3	2	5	5			4	4	
41														
42	Notes:													
43	1. Section II, Question 3.5 was only answered by those respondents who use a													
44	computer at home.													
45	Section II, Questions 5 and 6 were only answered by those respondents whose work													
46	computer does not have Internet access.													
47	3. Shaded areas indicate the respondent left the item blank.													
48	4. Section III, Item 10 is a reverse of Section III, Item 7.													
49	5. Section III, Item 15 is a reverse of Section III, Item 2.													
50														

	A	HO	HP	HQ	HR	HS	HT	HU	HV	HW	HX	HY	HZ	IA
1	Section I													
2	Level	base	base	base	base	base	base	base	base	base	base	base	base	base
3	Rank	0-3	E-5	E-5	E-6				0-1		0-4	g-9		0-5
4	Yrs in job	2	2	4	3				1		1	1		1
5	Yrs in service	8	10	10	12				1		18	20		22
6	Section II													
7	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
8	Question 2	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
9	Question 3	yes	yes	yes	yes	yes	no	no	yes	yes	yes	yes	no	yes
10	Question 3.5		yes	yes	yes							yes		
11	Question 4	yes	no	no	yes	yes	yes	yes	yes	yes	yes	yes	no	no
12	Question 5		yes	yes						yes				yes
13	Question 6		yes	no						no			no	yes
14	Section III													
15	Item 1	5	5	5	5	1	5	2	5	1	3	5		4
16	Item 2	3	5	3	1	5	1		5	2	2	1		3
17	Item 3	4	2	2	1	1	3	4	1	1	2	1		2
18	Item 4	4	4	5	3	2	4	2	4	1	3	4		4
19	Item 5	4	5	1	5	1	1	1	5	1	2	5		2
20	Item 6	1	4	2	3	1	2	5	4	1	2	5		2
21	Item 7	3	5	4	2	1	4	3	4	1	5	5		2
22	Item 8	3	5	4	4	1	5	3	5	1	5	5		4
23	Item 9	3	5	4	4	1	3	3	4	2	4	3		3
24	Item 10	2	1	1	1	3	1	3	1	2	2	1		3
25	Item 11	2	3	1	1	4	2	2	2	2	1	4		3
26	Item 12	2	1	1	3	2	3	4	3	2	3	3		2
27	Item 13	3	2	1	1	4	2	5	4	4	5	3		5
28	Item 14	3	5	4	2	3	4	3	4	2	4	5		3
29	Item 15	3	1	2	4	1	4	4	2	4	3	5		3
30	Item 16	3	5	3	2	3	4	2	4	2	3	5		3
31	Section IV													
32	Question 1	yes	yes	yes	yes	yes	yes	yes	no		no	3		no
33	Question 2	9	19	20	18	12	13	10	22	8	10	13		3
34	Question 3	1	1	1	1	1	1	1	1	1	1	1		1
35	Question 4	1	4	5	4	1	4	2	1	2	1	1		3
36	Question 5	6	4	6	6	5	5	5	4	6	6	4		5
37	Question 6	6	3	3	6	5	3	6	4	6		2		4
38	Question 7	6	3	5	3	6	5	5	1	6	6	4		6
39	Question 8	2	2	1	4	1	2	3	3		2	3		2
40	Question 9	4	4	5	4	4	4	3	4		4	4		4
41														
42	Notes:													
43	1. Section II, Question 3.5 was only answered by those respondents who use a													
44	computer at home.													
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48	4. Section III, Item 10 is a reverse of Section III, Item 7.													
49	5. Section III, Item 15 is a reverse of Section III, Item 2.													
50														

	A	IB	IC	ID	IE	IF	IG	IH	II	IJ	IK	IL	IM	IN
1	Section I													
2	Level	base	base	base	base	HQ	HQ	HQ	HQ	HQ	HQ	HQ		
3	Rank	g-5	E-7	O-2	E-9	O-4	O-5	g-13	O-5	O-3	O-4	O-6		
4	Yrs in job	5	3	1	2	1	2	4	1	2	1	3		
5	Yrs in service	14	18	4	27	12	28	22	14	6	10			
6	Section II													
7	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		
8	Question 2	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		
9	Question 3	yes	yes	yes	yes	yes	yes	yes	yes	no	yes	yes		
10	Question 3.5		no	yes		yes	yes	yes	yes		yes			
11	Question 4	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		
12	Question 5													
13	Question 6													
14	Section III													
15	Item 1	3	5	4	4	5	5	2	5	4	4	3		
16	Item 2	2	4	4	3	3	5	2	5	3	3	2		
17	Item 3	2	2	2	4	1	1	1	1	3	3	1		
18	Item 4	2	4	2	3	4	4	2	4	4	4	3		
19	Item 5	1	2	1	2	5	4	1	4	3	1	1		
20	Item 6	3	3	2	2	4	5	1	5	4	3	2		
21	Item 7	3	4	2	4	5	5	1	5	4	4	3		
22	Item 8	4	4	4	4	5	5	2	5	4	4	4		
23	Item 9	5	4	4	3	4	5	1	5	4	3	2		
24	Item 10	2	2	2	2	1	1	1	1	1	2	2		
25	Item 11	3	3	2	2	3	2	2	3	5	2	4		
26	Item 12	4	2	2	3	4	3	4	3	3	3	1		
27	Item 13	5	4	4	4	1	2	5	4	4	5	5		
28	Item 14	3	4	2	4	5	5	2	2	4	4	4		
29	Item 15	3	2	2	3	4	1	4	2	2	3	4		
30	Item 16	3	4	2	2	5	5	2	4	4	4	4		
31	Section IV													
32	Question 1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes		
33	Question 2	5	3	9	1	6	37	14	5	30	4	16		
34	Question 3	1	1	1	1	1	1	1	1	1	1	1		
35	Question 4	1	3	3	1	1	1	1	1	1	1	1		
36	Question 5	4	5	6	6	5	5	6	5	5	5	5		
37	Question 6	3	3	3	6	4	4	6	6	2	3	4		
38	Question 7	5	6	6	6	2	3	6	5	5	5	5		
39	Question 8	3	4	4	2	5	4	1	3	2	3	3		
40	Question 9	5	5	3	5	4	4	4	5	5	5	4		
41														
42	Notes:													
43	1. Section II, Question 3.5 was only answered by those respondents who use a													
44	computer at home.													
45	Section II, Questions 5 and 6 were only answered by those respondents whose work													
46	computer does not have Internet access.													
47	3. Shaded areas indicate the respondent left the item blank.													
48	4. Section III, Item 10 is a reverse of Section III, Item 7.													
49	5. Section III, Item 15 is a reverse of Section III, Item 2.													
50														

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Vita

Captain Pamela E. Quintero was born on August 19, 1962 in Ontario, California and graduated high school with honors in Austin, Texas in 1980. She attended Basic Military Training School in 1981 and was stationed at Castle AFB, California.

While at Castle AFB, Captain Quintero was assigned as Distribution Clerk, Special Orders Clerk, Noncommissioned Officer in Charge, Postal Service Center and Noncommissioned Officer in Charge, Special Orders, 93rd Combat Support Group. While there, she was promoted to Senior Airman below the zone and subsequently was promoted to Staff Sergeant with less than 3 years time in service.

In 1986, Captain Quintero was hand-picked to fill a selectively manned position as Noncommissioned Officer in Charge, B-2 Division, Directorate of Advanced Systems, Deputy Chief of Staff, Plans, Headquarters Strategic Air Command, Offutt AFB, Nebraska.

While at Offutt AFB, Captain Quintero was promoted to Technical Sergeant and attended Strategic Air Command Noncommissioned Officer's Academy where she was a Distinguished Graduate. Shortly thereafter, Captain Quintero received a line number for promotion to Master Sergeant. Meanwhile, she completed her Bachelor's Degree in Business Administration and graduated magna cum laude from the University of Nebraska, Omaha. After graduation, she was accepted into Officer Training School, where she was commissioned as a second lieutenant on July 31, 1991.

While at Officer Training School, Captain Quintero excelled in academics and athletics, graduating with the second highest academic average in her class of 48 officers. She also received the "Fleet Foot Award" as the fastest female runner in her class and the "Shakespearean Award," a testament to her outstanding writing abilities.

After commissioning, Captain Quintero attended technical training at Keesler AFB, Mississippi and was stationed at Grand Forks AFB, North Dakota where she became the Section Commander, 319th Field Maintenance Squadron and later Section Commander, 319th Maintenance Squadron.

In November 1993, Captain Quintero became the Executive Officer for the 319th Operations Group as the 319th Bomb Wing realigned under the 319th Air Refueling Wing. During that time, the Operations Group took on the enormous task of building from two squadrons to four operational squadrons and one support squadron. In December 1994, Captain Quintero took over duties as 319th Air Refueling Wing Protocol/Executive Officer, the position she held until selected to attend the Air Force Institute of Technology where she is a graduate student in the School of Logistics and Acquisition Management, Information Resource Management program.

Captain Quintero has a Master's Degree in Human Resource Management and possesses the Master Administrator Badge. Her awards and decorations include: Meritorious Service Medal, Air Force Commendation Medal with one oak leaf cluster, Air Force Outstanding Unit Award with two oak leaf clusters, Air Force Organizational Excellence Award with two oak leaf clusters, Air Force Good Conduct Medal with two oak leaf clusters, National Defense Medal, Air Force Longevity Service Ribbon with two oak leaf clusters, Air Force Noncommissioned Officers Professional Military Graduate Ribbon with one oak leaf cluster, and the Air Force Training Ribbon with one oak leaf cluster.

Permanent Address: 4291 Young St.
Pasadena TX 77504

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 074-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE December 1996		3. REPORT TYPE AND DATES COVERED Master's Thesis
4. TITLE AND SUBTITLE Internet Use Patterns, Acceptance Levels, and Policy Recommendations: An Information Technology Infusion Approach to the Internet and the United States Air Force			5. FUNDING NUMBERS	
6. AUTHOR(S) Pamela E. Quintero, Capt, USAF				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(S) Air Force Institute of Technology 2750 P Street WPAFB OH 45433-7765			8. PERFORMING ORGANIZATION REPORT NUMBER AFIT/GIR/LAR/96D-7	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) HQ AFMC SCP WPAFB OH 45433			10. SPONSORING / MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for release; distribution unlimited			12b. DISTRIBUTION CODE	
13. ABSTRACT (<i>Maximum 200 Words</i>) Information technology infusion has taken place in the workplace as costs for microcomputers have declined and the need for reliable and timely information has increased, but the impact the Internet has had is yet to be determined. This research takes an information technology infusion approach to the Internet and focuses on the use patterns of current Air Force Internet users, acceptance levels, and supervisory support of the technology, as well as policy recommendations regarding Internet use in the Air Force. The research provides substantial evidence that Internet technology is not being infused equally within all organizational levels in the Air Force. All infusion measures used in this research show that Internet technology is more highly infused at the headquarters-level than it is at base-level. This research also demonstrates that supervisory support for Internet use positively affects user acceptance levels on the part of subordinates. Access to the Internet is also shown to improve Air Force members' productivity on the job.				
14. SUBJECT TERMS Internet, information technology infusion, Internet policy, user acceptance, supervisory support			15. NUMBER OF PAGES 197	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT UNCLASSIFIED	20. LIMITATION OF ABSTRACT UNCLASSIFIED	

AFIT RESEARCH ASSESSMENT

The purpose of this questionnaire is to determine the potential for current and future applications of AFIT thesis research. **Please return completed questionnaire to: AIR FORCE INSTITUTE OF TECHNOLOGY/LAC, 2950 P STREET, WRIGHT-PATTERSON AFB OH 45433-7765.** Your response is **important**. Thank you.

1. Did this research contribute to a current research project? a. Yes b. No
2. Do you believe this research topic is significant enough that it would have been researched (or contracted) by your organization or another agency if AFIT had not researched it? a. Yes b. No

3. **Please estimate** what this research would have cost in terms of manpower and dollars if it had been accomplished under contract or if it had been done in-house.

Man Years \$

4. Whether or not you were able to establish an equivalent value for this research (in Question 3), what is your estimate of its significance?

- a. Highly Significant b. Significant c. Slightly Significant d. Of No Significance

5. Comments (Please feel free to use a separate sheet for more detailed answers and include it with this form):

Name and Grade

Organization

Position or Title

Address